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ABSTRACT

This technical assistance handbook contains information on identifying Kentucky gifted students, including gifted students who live in rural areas or who are economically disadvantaged. Included in the handbook are: (1) recommendations for ensuring equity in the identification and assessment process; (2) a draft of a school district policy on identification procedures; (3) definitions of giftedness listed in state regulations; (4) a chart showing recommended procedures for informal primary talent pool identification; (5) a chart showing recommended procedures for formal identification of grade 4-12 students; (6) charts providing information on assessment instruments for measuring general intellectual aptitude, behavior characteristics and creative behaviors, general and specific academic achievement, and self-concept; and (7) suggestions for teacher identification of gifted students. Appendices, which make up the bulk of the document, include surveys for adult community members, parents, and teachers to identify gifted students; suggestions for parents in developing their child's gifts; a primary portfolio talent guide for portfolio assessment; a table showing the characteristics of rural gifted students and disadvantaged rural gifted students; behavior rating instruments; an outline for curriculum differentiation in different content areas; and a description of standardized instruments used in the identification of gifted students. (CR)

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ED 401 669

PROJECT DISCOVERY TECHNICAL ASSISTANCE HANDBOOK

DISCOVERING THE TALENTS OF RURAL AND/OR ECONOMICALLY DISADVANTAGED GIFTED STUDENTS

Funded through a grant from the
United States Department of Education
Jacob K. Javits Gifted and Talented Students Education Program
Project R206A20098

April, 1994

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April, 1994

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INTRODUCTION

This technical assistance handbook was created to provide Ohio Valley Educational Cooperative school districts a framework to design identification procedures and services for its gifted and talented students. This handbook is intended to be a resource guide and not a proscriptive mandate. The design of identification procedures and service delivery options should be based on matching student need(s) and appropriate services. Districts should refer to the Gifted and Talented Education Technical Assistance Guide designed by the Kentucky Department of Education to answer specific questions concerning implementation of identification procedures and service delivery options when in doubt.

Services for gifted children have been provided by OVEC school districts since the early 1980's. Since that time, our state has gone through a radical change in the way schools educate students. No longer is it possible to reserve critical thinking strategies, problem solving, general enrichment, independent learning opportunities, etc., for only the most academically advanced students. With the enactment of the Kentucky Education Reform Act (KERA), it is now imperative that all students be engaged in rich learning experiences that provide an opportunity to reach high levels of achievement.

In the Fall of '94, an amended regulation governing services for gifted/talented students will be in place that will have an enormous impact on every school district statewide. Every district must establish policy and procedures to discover and nurture the talent of any child at every grade level across five areas of talent. Those five areas are: General Intellectual Aptitude, General and/or Specific Academic Aptitude, Creative/Productive Thinking, Leadership, and the Visual/Performing Arts. Also, districts must give special consideration for those students not typically identified as gifted: economically disadvantaged, rural disadvantaged, minorities, and handicapped children.

School districts must begin to rethink how gifted/talented students are identified and served. No longer is it possible to give the responsibility of this task to one person or a small cadre of itinerant teachers. The education of gifted/talented children must be the responsibility of every staff member at every school. The recognition of talent and the strategies needed to implement inclusive, equitable, and appropriate services for gifted children will take time. It will also take a commitment by districts to train teachers, counselors, and administrators to meet the needs of these children.

It is recommended that districts specifically match identification procedures with the type of talent they are searching for. For example: when a teacher refers a child for outstanding ability in art, the process should reflect a singular focus on that area of talent. Data need to be collected about the child's art ability and assessed by someone familiar with artistic talent.

Each sample referral form, checklist, etc., should be examined carefully prior to its use. Some items are sold commercially and may not be used with students without the publishers' permission.

RECOMMENDATIONS

For Ensuring Equity in the Identification and Assessment Process

(1) Identification Should be Based on Broad Conceptions of Giftedness
Examples: Sternberg, Gardner, Renzulli, Tannenbaum, U.S. Department of Education

(2) Identification Practices Should be Multidimensional
(Use Multiple Criteria and Sources)

(a) Use both standardized and non-standardized instruments

(b) Source of information: the student him/herself, teachers, parent(s), peers, other school personnel who are familiar with gifted students.

(3) MULTIMODOL
(Focuses on both intellectual and non-intellectual factors)

Examples: creativity, visual and performing arts ability, verbal skills, specific academic ability, intrapersonal ability, interpersonal ability, psychomotor ability, spatial ability, motivation, attitudes, interests.

(4) Select Unique Instrumentation(s) for Different Areas of Giftedness.

There is no 'one size fits all' instrument.

Do not use 'intelligence' tests to measure achievement, creativity, and other gifted constructs.

(5) Avoid SINGLE scores.

Due to measurement errors common to all instruments, it is best to use a range of scores in the identification and assessment process.

(6) Use Appropriate Instruments with Underserved Populations.

Such instruments must not be biased relative to soci-economic status, gender, underachievers, students whose primary language is not English, and other student populations and characteristics. As with all instruments, they must be both valid and reliable.

(7) Identification and Placement Based on Student NEED(S)

The key is to provide a high quality match between services and the needs of the child.

In accord with KRS 157.200, _____ School District shall provide a procedure for the identification and diagnosis of students displaying gifted and talented behaviors and characteristics which includes a combination of informal measures and multiple service delivery options at the primary level and formal and informal measures and objective-based criteria, performed on a three year cycle, and multiple service delivery options in grades four through twelve. Such procedures shall be based upon a balanced multiple criteria approach, continuous and multiple long-term assessment and an early identification process . Both the diagnosis and servicing will require prior parent or guardian permission.

Students at the primary level may not be determined to be ineligible for services based on data from a formal, normed measurement instrument, nor at any level shall a single assessment instrument or measure be the basis for formally identifying or denying services once a child has been informally identified and placed in the talent pool.

For children in the primary program screening and referrals for services must be based on the use of at least three assessment options defined in Section 3, (9) of 704 KAR 3:285.

For students in grades four through twelve screening and referrals must be based on the use of at least three of the assessment options defined in Section 3, (11 b) of 704 KAR 3:285, with eligibility based on the student meeting the criteria provided in at least one of the gifted and talented categories defined in Section 3, (12) of 704 KAR 3:285

Such procedures for determining eligibility for services shall be based on a process that includes 1. a data gathering system for identifying likely candidates for services 2. data analysis 3. a selection committee designed to a) provide feedback on the adequacy of the identification and diagnostic procedure b) insure a variety of views during the selection process c)to determine which students should receive services and at what level d) help provide communication and support in the community 4. provision of services 5. petition and appeal process for services

Environmental, cultural and disabling conditions must also be taken into consideration in the process of identification and servicing for those eligible.

Provisions must be made for program evaluation on an annual basis. Such evaluation should include: student progress, student, parent and faculty attitudes, community involvement, cost effectiveness, the integration of the program into the regular school program, the quality of instruction and credentials of personnel, and future program directions and modifications.

Funding decisions for subsequent years shall be based on the evaluation process referenced above, with 75% of the district's gifted education allocation used to employ properly certified personnel to provide direct instructional services.

A gifted education coordinator shall be designated whose role is defined in Section 9(3) of 704 KAR 3:285.

Services shall be provided which are qualitatively differentiated to meet the individual needs of the qualified students and result in educational experiences commensurate with their identified interests, needs and abilities and facilitate the high level of attainment of goals established in KRS 158.6451. For primary students these services shall be provided within the framework of the primary program requirements, and consistent with 704 KAR 3:440(2), with the two exceptions of the special school and the self-contained classroom, all service delivery options shall be available in the primary program.

Grouping for instructional purposes and multiple services delivery options shall be utilized in the district educational plan, with no single service option existing alone at any grade level districtwide.

A comprehensive framework or course of study shall be provided based on the district or school's curricula required to meet the goals established in KRS 158.6451, and personnel employed to provide such a course of study shall be appropriately credentialed or prepared through professional development opportunities.

A grievance procedure to allow parents and students to resolve concerns regarding the appropriate and adequate provision of services shall be established which shall address the process for initiating a grievance, the need to evaluate a child for appropriate services, the appropriate placement of a student, and the appropriate providing of services.

DEFINITIONS OF GIFTEDNESS LISTED IN STATE REGULATIONS

General Intellectual Ability - means possessing either the potential or demonstrated ability to perform at a exceptionally high level in general intellectual ability and possessing a consistently outstanding mental capacity as compared to children of one's age, experience, or environment. General intellectual ability is usually reflected in extraordinary performance in a variety of cognitive areas, such as abstract reasoning, social awareness, memory, spatial relations, and the analysis, synthesis, and evaluation of information.

Specific Academic Aptitude - means possessing either potential or demonstrated ability to perform at an exceptionally high level in specific academic areas significantly beyond the age, experience or environment of one's chronological peers. While students with specific academic aptitude are typically of at least above average intellectual ability, they are often extremely capable of high performance in one, or a very few related, academic area.(s)

Leadership or Psychosocial Ability - means possessing either potential or demonstrated ability to perform at an exceptionally high level in social skills and interpersonal qualities such as poise, effective oral and written expression, managerial ability, and the ability, or vision, to set goals and organize others to successfully reach those goals.

Visual or Performing Arts Ability - means possessing either potential or demonstrated ability to perform at an exceptionally high level in the visual or performing arts and demonstrating the potential for outstanding aesthetic production, accomplishment, or creativity in areas such as art, dance, music, drama, speech, and in activities requiring exceptional gross or fine motor skills.

Creative or Divergent Thinking Ability - means possessing either potential or demonstrated ability to perform at an exceptionally high level in creative thinking and divergent approaches to conventional tasks as evidenced by innovative or creative reasoning, advanced insight and imagination, and solving problems in unique ways.

INFORMAL PRIMARY TALENT POOL IDENTIFICATION
GIFTED EDUCATION ELIGIBILITY COMPONENTS
RECOMMENDED PROCEDURE FOR DETERMINING ELIGIBILITY FOR SERVICES

Procedural Component	Persons /Committee Responsible	Description of Procedure
REFERRAL for SERVICES ** Determine Areas of Potential Talent 1. General Intellectual Aptitude 2. General or Specific Acad. Aptitude 3. Creative/Productive Thinking 4. Visual/Performing Arts 5. Leadership Ability	Parent(s)/Guardian(s) Teachers G/T Specialist Counselor Administrators Community Members	The process of referral begins when an individual recognizes demonstrated or high potential in a child in one or more of the five areas of talent and notifies the designated person or committee to begin collecting additional data. It is possible that up to a 3rd of all primary students may be included in talent pool.
COLLECT DATA on CHILD ** G/T coordinator organizes committee to collect data ** Committee identifies minimum of three types of informal data to collect.	Parent/Guardian Teachers G/T Specialist Counselors Administrators	Committee meets to determine types of data to collect specific to type of talent(s) student is observed to have. A minimum of three informal assessments must be used to gather data on the child. After data is collected, the primary committee meets to assess data.
EVALUATE DATA ** Special consideration must be provided for economically and/or rural disadvantaged, minority, handicapped students, and underachieving talented students.	Teachers G/T Specialist Counselor School Psychologist Administrator	The identification committee designated by the district meets to evaluate the data collected to determine whether or not child should receive some level of service. The focus here is to be as inclusive as possible so that more children may have access to services.
DETERMINE LEVEL/TYPE of SERVICE ** Decide which multiple service delivery options are most appropriate to meet individual needs of child. ** Design implementation plan.	Parent/Guardian Teachers G/T Specialist Administrator Community Member	Committee designs specific educational modifications to develop talent of a child. The focus here is to identify which options are both appropriate and adequate. The key is to privide a high quality match between services and the needs of the child.
IMPLEMENT PLAN		

FORMAL IDENTIFICATION GRADES 4-12
GIFTED EDUCATION ELIGIBILITY COMPONENTS
RECOMMENDED PROCEDURE FOR DETERMINING ELIGIBILITY FOR SERVICES

Procedural Component	Persons /Committee Responsible	Description of Procedure
REFERRAL for SERVICES ** Determine Areas for Evaluation 1. General Intellectual Aptitude 2. General or Specific Acad. Aptitude 3. Creative/Productive Thinking 4. Visual/Performing Arts 5. Leadership Ability	Parent(s)/Guardian(s) Teachers G/T Specialist Counselor Administrators Community Members	The process of referral begins when an individual recognizes demonstrated or high potential in a child in one or more of the five areas of talent and notifies the designated person or committee to begin collecting additional data. Students with potential who are underachievers should also be referred.
COLLECT DATA on CHILD ** Obtain parent permission to use formal assessments. ** Committee identifies informal & formal types of data to collect.	Parent/Guardian Teachers G/T Specialist Counselor Administrators	Committee meets to determine types of data to collect specific to type of talent(s) student is observed to have. A minimum of two informal and one formal assessment must be used to gather data on the child. After data is collected, the committee meets to assess data.
EVALUATE DATA ** Special consideration must be provided for economically and/or rural disadvantaged, minority, handicapped students, and underachieving talented students.	Teachers G/T Specialist Counselor School Psychologist Administrator	The identification committee designated by the district meets to evaluate the data collected to determine whether or not child should receive some level of service. Teachers should participate based on their area of knowledge related to child and type of referral.
DETERMINE LEVEL/TYPE of SERVICE ** Decide which multiple service delivery options are most appropriate to meet individual needs of child. ** Design implementation plan.	Parent/Guardian Teachers G/T Specialist Administrator Community Member	Committee designs specific educational modifications to develop talent of a child. The focus here is to identify which options are both appropriate and adequate. The key is to provide a high quality match between services and the needs of the child.
IMPLEMENT PLAN		

GENERAL INTELLECTUAL APTITUDE

TEST DATA BANK

INSTRUMENTS	LEVEL	SPECIAL CONSIDERATIONS	GIFTED DEFINITION	GROUP/INDIVIDUAL SCORING	TIME	COST	PUBLISHER
Cognitive Abilities Test	K-12	N/A	N/A	Group Hand Scored	90 min.	$42.30/ 25 books $30.90/ manual	Riverside Publishing Company/ Houghton Mifflin Chicago, IL 60631 1-800-323-9540
Cognitive Skills Index (CSI), CTBS	K-12	N/A	General IQ	Group Hand Scored	90 min.	32.00/ kit	CST 2500 Garden Rd. Monterey, CA 93940
DAT - Differential Aptitude Test	9-12	N/A	General IQ Specific Intellectual abilities	Group Hand Scored	180 min.	$13.00/ Specimen set	Psychological Corp.
KABC - Kaufman	P-K K-6	Non-verbal Minorities Economically Disadv.	Information Processing	Individual Hand Scored	90 min.	$175.00/ kit	American Guidance Service Circle Pines, NM
MAT - Matrix Analogies Test (Expanded form)	P-K K-6 6-9 9-12	Non-verbal Minorities Economically disadv.	USOE Three Ring General IQ	Individual	30 min. untimed	69.00/ specimen	Psychological Corporation
OTIS LENNON	K-12	N/A	General USOE Three Ring	Group hand/computer scored	varies	14.00/ examiner kit	Psychological Corporation
Peabody Picture Vocabulary Test, Revised	Ages 2.5 - adult	Racial/ethnic minorities	General IQ	Individual Examiner scored	10-20 min.	$46.00/ kit	American Guidance Service Publisher Building Circle Point, MN 55014
Ravens	K-12	Minorities non-verbal hearing impaired ESL Physically challenged	General IQ USOE Three-ring	Small group or individual Hand Scored (Easy)	40 min. - timed 60 min. - untimed	86.00/ 25 tests 15.90/ specimen	Western Psychological Serv. Order Dept. 12031 Wilshire Blvd. Los Angeles, CA 90025 1-800-222-2670

GENERAL INTELLECTUAL APTITUDE CON.

INSTRUMENTS	LEVEL	SPECIAL CONSIDERATIONS	GIFTED DEFINITION	GROUP/INDIVIDUAL SCORING	TIME	COST	PUBLISHER
Ross Test of Higher Cognitive Skills	4-6	Gifted Screening	Not Available	group hand scored	50-55 min.	15.00/manual 15.00/ 10 test 10.00/ 25 ans. sheets	Academic Therapy Publications
SAGES - Screening Assessment for Gifted Elementary Students	K-6	Non-verbal	Not Available	Individual Small Group	30 - 50 min.	$89.00/kit (reusable)	Pro-Ed. 5341 Industrial Oaks Blvd. Austin, TX 78735
Slosson	All ages	Hispanic-americans Visually impaired	General IQ USOE Three Ring	Individual examiner scored	10-20 min untimed	48.00/ kit	Slosson Ed. Publication P.O. Box 280
SOI - Learning Abilities Test	P-K K-6 6-9 9-12	minorities ethnic specific general	Structure of Intellect	Individual/group hand/computer scored	1-2 hours	1.90/ test 35.00 /manual $125.00 /kit	Western Psychological Service
SRBCSS Scales for Rating the Behavorial Characteristics of Superior Students (Renzulli-Hartman scale)	K-12	Economically disadvantaged non-english speaking	General IQ	Individual examiner evaluated	varies	49.95/100 test 8.95/ kit	Creative Learning Press
TONI - Test of Non-verbal Intelligence	ages 5-85	Learning disabled bi-lingual deaf brain injured non-english speaking	General IQ USOE Three Ring	Group -- no more than 5 members	10-15 min untimed	$109.00/ kit	PRO-ED 8700 School Creek Blvd. Austin, TX 78758
TONI-2 Test of Nonverbal Intelligence-2	ages 5 and older	Same as TONI	Same as TONI	Individual or small group	10-15 min.	$146.00/kit $33.00/pkg. of 50 booklets	Psychological Assessment Resources, Inc. 1-800-331-8378

BEHAVIORAL CHARACTERISTICS & CREATIVE BEHAVIORS DATA BANK

INSTRUMENTS	LEVEL	SPECIAL CONSIDERATION	GIFTED DEFINITION	GROUP/INDIVIDUAL SCORING	TIME	COST	PUBLISHER
Creativity Tests for Children	K-12	Not Available	Divergent producations	Group	N/A	N/A	Sheridan Psychological Services
GIFFI	6-12	Minority Ethnic/general population	USOE	Group Machine Scored	20-40 min. untimed	60.00/ 30 tests	Not Available
GIFT	K-6	Identify gifted students economically disadvantaged	USOE	group machine scored	20-40 min. untimed	44.00/ 30 test	Educational Assessment Services
Project DISCOVERY Primary Performance and Portfolio Talent Guide	K-3	Rural Disadvantaged Econ. Disadvantaged General population	USOE	Individual	10-20 min. Per/Perfor. 20-40 min. Per/Portfol.	15.00/kit	Ohio Valley Educational Cooperative, 205 Parker Dr. La Grange, KY 40031 502-222-4573
RAT – Remote Associates Test	9-12	Special Art Minority Economically disadvantaged	USOE Three ring	Group	N/A	N/A	Houghton Mifflin Co.
SRBCSS Scales for Rating the Behavioral Characteristics of Superior Students (Renzulli-Hartman Scale)	K-12	Economically disadvantaged non-english speaking Identify gifted	General IQ	Individual examiner evaluated	varies	49.95/100 test 8.95/ kit	Creative Learning Press
Test of Creative Potential	K-12	N/A	Not Available	Group	22 min.	30.00/ 35 tests 4.00/ manual	Monitor Publications
Thinking Creatively in Action and Movement	P-k K-6	non-verbal	Three ring USOE	Individual examiner evaluated	10-30 min.	15.75/ 20 test	E.P. Torrance Scholastic Testing Services
TTCT - Torrence Test of Creative Thinking	K-12	Minorities	USOE Three Ring	Group Hand scored	30-45 min.	15.00/ 20 tests	E.P. Torrance Scholastic Testing Services
Williams Creative Assessment Packet	Age 6-18	Not Available	Not Available	Group Examiner Scored	Varies	40.00/ set	United Educational Services Inc. 1-800-458-7900

GENERAL ACADEMIC AND SPECIFIC ACADEMIC ACHIEVEMENT TEST DATA BANK

INSTRUMENTS	LEVEL	SPECIAL CONSIDERATIONS	GIFTED DEFINITION	GROUP/INDIVIDUAL SCORING	TIME	COST	PUBLISHER
CAT – California Achievement Test	K-6 6-9 9-12	Not Available	USOE	Group hand/computer scored	2-6 hours	37.45/ kit	Mc Graw Hill
Comprehensive Test of Basic Skills	Pre K-12	Not Available	USOE	Group Hand/computer scored	2-4 hours	32.00/kit	McGraw Hill
Iowa Test of Basic Skills	K-9	N/A	N/A	Group hand/computer scored	2-4 hours	cost varies	Riverside Publishing Co.
KTEA – Kaufman Test of Educational Achievement	1-12	Learning disabled Remedial readers economically disadvantaged	n/a	group hand/computer scored	90 min.	175.00/ kit	American Guidance Service Publisher Building Circle Point, MN 55014
PIAT - Peabody Individual Achievement Test	K-6 6-9 9-12	Learning disabled	Not Available	individual examiner scored	60 min.	175.00/ kit	American Guidance Service Publisher Building Circle Point, MN 55014
SRA Achievement	PreK K-6 6-9 9-12	Visually impaired	USOE	Group Hand/computer scored	varies	Not Available	Science Research Associates, Inc.
Woodcock-Johnson, '91 Version	Pre K-12	Handicapped underachievers	N/A	Individual	varies	4.95/set	Riverside Publishing Co.

SELF-CONCEPT TEST DATA BANK

INSTRUMENTS	LEVEL	SPECIAL CONSIDERATIONS	GIFTED DEFINITION	GROUP/INDIVIDUAL SCORING	TIME	COST	PUBLISHER
PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE	K-12	minority special populations	Not Available	Individual hand/computer scored	15-20 min.	55.00/ kit	Western Psychological Services
HARTMAN VALUE PROFILE	Ages 5-Adult	Not Available	U.S.O.E	Individual hand/computer scored	20-30 min.	8.75/for 30 profiles 12.00/	Research Concepts
The HARTER PICTORIAL SCALE OF PERCEIVED COMPETENCE & SOCIAL ACCECPTANCE FOR YOUNG CHILDREN	PRE-K-2	Not Available	Competence & Social Acceptance	Individual	Not reported	15.00/booklet 7.00/manual	Susan Harter
TENESSEE SELF-CONCEPT SCALE	6-9 9-12	General	Not Available	Individual hand/computer scored	10-20- min.	75.00/kit	Counselor Recording and Tests

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Appendix III-F

Teacher: _____

PANNING FOR GOLD

irections: Observe the target population students in your class. As they show evidence of extraordinary potential, jot the students' names and rief notes about the incident in the appropriate boxes. Use these notes as reminders of student performance in order to advocate gifted lacement for them.

MOTIVATION Evidence of desire to learn *GENERAL DESCRIPTION:* *Forces that initiate, direct, & sustain individual or group behavior in order to satisfy a need or attain a goal* *HOW IT MAY LOOK:* *Persistent in pursuing/ completing self-selected tasks (may be culturally influenced; evident in school or non-school activities) Enthusiastic learner; Has aspirations to be somebody, do something*	**INTERESTS** Intense (sometimes unusual) interests *GENERAL DESCRIPTION:* *Activities, avocations, objects, etc., that have special worth or significance and are given special attention* *HOW IT MAY LOOK:* *Unusual or advanced interests in a topic or activity; Self-starter; Pursues an activity unceasingly; Beyond the group*	**COMMUNICATION SKILLS** Highly expressive (with words, with numbers, with symbols) *GENERAL DESCRIPTION:* *Transmission and reception of signals or meanings through a system of symbols (Codes, gestures, language, numbers)* *HOW IT MAY LOOK:* *Unusual ability to communicate (verbally, nonverbally, physically, artistically, symbolically); Uses particularly apt examples, illustrations, or elaborations*	**PROBLEM-SOLVING ABILITY** Effective (often inventive) strategies for recognizing and solving problems *GENERAL DESCRIPTION:* *Process of determining a correct sequence of alternatives leading to a desired goal or to successful completion or performance of a task* *HOW IT MAY LOOK:* *Unusual ability to devise or adopt a systematic strategy for solving problems and to change the strategy if it's not working; Creates new designs; Inventor*	**MEMORY** Large storehouse of information (on school or non-school topics) *GENERAL DESCRIPTION:* *Exceptional ability to retain and retrieve information* *HOW IT MAY LOOK:* *Already knows; 1-2 repetitions for mastery; Has a wealth of information about school or non-school topics; Pays attention to details; Manipulates information*
INQUIRY Questions, experiments, explores *GENERAL DESCRIPTION:* *Method or process of seeking knowledge, understanding, or information* *HOW IT MAY LOOK:* *Asks unusual questions for age; Plays around with ideas; Extensive exploratory behaviors directed toward eliciting information about materials, devices, or situations*	**INSIGHT** Quickly grasps new concepts and makes connections; senses deeper meanings *GENERAL DESCRIPTION:* *Sudden discovery of the correct solution following incorrect attempts based primarily on trial and error* *HOW IT MAY LOOK:* *Exceptional ability to draw inferences; Appears to be a good guesser: Is keenly observant; Heightened capacity for seeing unusual and diverse relationships, integration of ideas and disciplines*	**REASONING** Logical approaches to figuring out solutions *GENERAL DESCRIPTION:* *Highly conscious, directed, controlled, active, intentional, forward-looking, and goal-oriented thought* *HOW IT MAY LOOK:* *Ability to make generalizations and use metaphors & analogies; Can think things through in a logical manner; Critical thinker; Ability to think things through and come up with a plausible answer*	**IMAGINATION/ CREATIVITY** Produces many ideas. Highly original *GENERAL DESCRIPTION:* *Process of forming mental images of objects, qualities, situations, or relationships which aren't immediately apparent to the senses; Problem solving through nontraditional patterns of thinking* *HOW IT MAY LOOK:* *Shows exceptional ingenuity in using everyday materials; Is keenly observant; Has wild, seemingly silly ideas; fluent and flexible producer of ideas; Highly curious*	**HUMOR** Conveys and picks up on humor well *GENERAL DESCRIPTION:* *Ability to synthesize key ideas or problems in complex situations in a humorous way; exceptional sense of timing in words and gestures* *HOW IT MAY LOOK:* *Keen sense of humor that may be gentle or hostile; large accumulation of information about emotions; Capacity for seeing unusual relationships; Unusual emotional depth; Openness to experiences; sensory awareness*

Adapted from Sandra Kaplan's "Jot Sheet"

PANNING FOR GOLD*

*based on draft materials developed by the Univeristy of Georgia site of the National Research Center on Gifted and Talented

REASONING	MOTIVATION
INTEREST	PROBLEM SOLVING
INSIGHT	INQUIRY
HUMOR	MEMORY
COMMUNICATION	IMAGINATION/CREATIVITY

Overhead / Handout #21 / Section 2 / Part 1

SURVEY Of ADULT COMMUNITY MEMBERS

We are looking for elementary students in our community who have unusual abilities outside the classroom. Do you have frequent contact with elementary students and know any that you feel are outstanding in some respect? If so, will you please complete the following survey? Thank you.

Your Name:_____ Phone: _____

Address:_____

With what student club, group, or organization do you work?_____

_____

What age students?_____

Can you identify any students with the following abilities and give some examples?

1. Completes unusual projects or products for his/her age:
   Names Examples

2. Is very interested in reading, knowledge, or research:
   Names Examples

3. Knows a lot about a certain subject, hobby or interest:
   Names Examples

4. Is a leader and can always be counted on to finish things and get other children to do things; other children look up to them:
   Names Examples

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5. Always thinks of new and unusual ways to do things:
   Names Examples

6. Can build things or fix things like an adult, or above average ability for his/her age level:
   Names Examples

7. Is unusually skilled in some area or ability:
   Names Examples

8. Understands adult ideas and concepts; is able to reason well:
   Names Examples

9. Other areas we did not ask you about:
   Names Examples

10. Would you like to give us a follow-up interview to discuss your survey? If so, where or when would be a convenient time for you?

Yes_____ No_____ Date, Time:_____

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Overhead / Handout #16 / Section 2/ Part 1

PARENT INFORMATION SURVEY

Student Name _____ Date _____

Parent Name _____

Directions: If your child has special talents or interests in any of the areas jon this form, please fill them out. Fill out only the categories that fit your child. Return this form to your child's teacher by _____. Thank you for your help.

My Child

1. Fixes things: _____ yes _____ no
   If yes...What kinds of things? _____

   How long has he / she done this? _____

   Can you remember (and tell us) any stories about this? Or send a sample to school? What is it? _____

2. Makes things: _____ yes _____ no

   If yes...What kinds of things? _____

   How long has he/she done this? _____

   Can you remember and tell any stories about this? Or send a sample to school? What is it? _____

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3. Collects things: _____ yes _____ no

If yes....What kinds of things? _____

_____

_____

How long has he/she done this? _____

_____

Can you remember and tell any stories about this? Or send a sample to school? What is it? _____

_____

_____

4. Writes things: _____ yes _____ no

If yes...What kinds of things? _____

_____

_____

How long has he/she done this? _____

_____

Do you have some samples of work that you can send to school?

_____

5. Reads a lot: _____ yes _____ no

If yes...What kinds of things? _____

_____

_____

6. Is really interested in: What? _____

For how long? _____

Do you have any samples? _____

7. Something that hasn't been mentioned that I would like to tell you about my child:

_____

_____

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TEACHER INFORMATION - I

Student _____ Grade _____
Teacher _____ Date _____

Humor

1. Portrays the comical, funny amusing in writing, drawings, (cartoons) or role-playing.
   How long has she/he done this? _____
   Can you remember (and tell us) any stories about this?
   What are they? _____

2. Makes people laugh in games. Makes up humorous jokes; tells about her/his experience with humor. Makes people laugh (not make fun of) in discussion.
   How long has she/he done this? _____
   Can you remember (and tell us) any stories about this? _____
   _____
   What are they? _____
   _____

Creativity

1. Ability to improvise with commonplace materials. Makes or modifies toys, or games with commonplace materials; uses commonplace materials in "inventions", contrivances, or gadgets:

   How long has she/he done this? _____
   Can you remember (and tell us) any stories about this? _____
   What are they? _____
   _____

2. Uses commonplace materials for school purposes or in role-playing and/or creative dramatics:
   How long has she/he done this? _____

Can you remember (and tell us) any stories about this?
What are they?_____

_____

3. Responds to the concrete. Ideas start flowing when concrete objects and materials are involved; uses concrete objects and materials to generate ideas, solutions, etc.:
How long has she/he done this?_____
Can you remember (and tell us) any stories about this?
What are they?_____

_____

Leadership

1. Influences other children to do things she/he initiates:
How long has she/he done this? _____
Can you remember (and tell us) any stories about this?
What are they?_____

_____

2. Plans activities for group and/or self, and organizes group to carry out activities:
How long has she/he done this? _____
Can you remember (and tell us) any stories about this?
What are they? _____

_____

Originality

1. Produces solution that others do not think of or when no one else can:
How long has she/he done this? _____
Can you remember (and tell us) any stories about this?
What are they? _____

_____

2. Comes up with inventions (real or imagined) to solve problems; innovates with commonplace materials to produce solutions to day-to-day problems:
How long has she/he done this? _____
Can you remember (and tell us) any stories about this?
What are they? _____

_____

What are they?_____

_____

2. Comes up with inventions (real or imagined) to solve problems; innovates with commplace materials to produce solutions to day-to-day problems:
How long has she/he done this? _____
Can you remember (and tell us) any stories about this?
What are they? _____

_____

Academic

1. Has a sustained / enduring interest in a particular subject area, i.e., science, literature, social studies, even though she/he may not complete assignments:

What are the subjects? _____
How long has she/he done this?_____
Can you remember (and tell us) any stories about this?
What are they?_____

_____

Something that hasn't been mentioned that I would like to tell about this child: _____

_____

_____

_____

_____

TEACHER INFORMATION II

Student_____

Teacher_____School _____

1. Does he/she improvise with commonplace materials and objects for school purposes: What kinds of things? Please tell us (write about it). _____

_____

_____

2. Comes up with inventions and ideas (real or imagined) to produce solutions to day-to-day problems: What kinds of things?

_____

_____

_____

_____

Can you remember (and tell us) any stories about this?

_____

_____

_____

_____

3. Produces solutions and ideas that others do not think of. How long has he/she done this?

Can you remember (and tell us) any stories about this?

_____

_____

_____

4. Influences other children to do things he/she initiates. How long has he/she done this?

Can you remember (and tell us) any stories about this?

_____
_____
_____
_____

5. Tries to be funny. He/She is amusing in writing, drawings, or role playing. Makes up humorous jokes; tell about her/his experiences with humor.

Can you remember (and tell us) any stories about this?

_____
_____
_____
_____

6. Has a sustained/enduring interest in a subject i.e., science, math, literature, and advances ideas and concepts about the subject(s), even though she/he may not complete assignments.

Which subject(s)? _____
_____
_____

Can you remember (and tell us) any stories about this?

_____
_____
_____

7. Something that has not been mentioned that I would like to tell about this child:

_____
_____
_____

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From Project DISCOVERY, Ohio Valley Educational Cooperative, Parent Brochure

Suggestions for Parents

What talents does your child exhibit?	How can you encourage these talents?
Linguistic Learners: •have highly developed auditory skills and well developed vocabularies, with accurate spelling •enjoy reading and writing •have good memories for names, dates and places •are creative and easily spin tall tales	•Talk with your child •Provide books, records, tapes (music and spoken word) •Provide typewriters •Expose them to libraries and other places where words are important •Read together
Logical Learners: •enjoy exploring patterns and relationships •complete task in sequential order •are problem solvers and logical thinkers •find math easy and computes well •naturally curious	•Provide materials and time for child to explore or experiment •Be patient in their frequent questioning, help them find answers •Provide logic games such as Chess, CLUE •Provide science kits, computers •Visit museums and other exhibitions •Allow them to help you solve real family problems
Spatial Learners: •enjoy creating and observing art •capable of mapping and charting •visualize easily •are artistically creative	•Provide films, video and slides •Create dioramas, maps and charts •Provide opportunities to draw and paint •Have Lego blocks, clay and cameras •Visit planetariums and art museums •Allow them to help plan the route for vacations
Musical Learners: •are sensitive to sounds both in nature and ones created by man •recognize rhythms and pitch easily •enjoy pattering •will choose music over reading and writing	•Sing with your child •Tap rhythms •Use metronomes, percussion instruments and chants to recognize rhythms •Talk about sounds of nature and man-made sounds •Experience operas, concerts and musicals
Kinesthetic Learners: •are sensitive to touch •understand when active in learning through body movement or manipulative use •easily role plays events to help learn •enjoys and learns through creative movement	•Allow children to help you fix machines, build things •Involve them with hands-on art (molding clay, finger paints) •Act out events •Encourage spots activities including hiking, swimming, camping, and team sports •Experience sport events •Learn through working and experiencing home or farm
Interpersonal Learners: •enjoy working cooperatively in groups •learns best when working with others •enjoy social activities •has empathy and feelings toward others •generally outgoing	•Provide opportunities for the child to explain learning to someone else •Play games •Participate in clubs (boy/girl scouts) •Problem solve as a family •Go on family oriented trips •Provide opportunity for social events
Intrapersonal Learners: •prefer working as independent learners •are aware of their own strengths and weaknesses •prefer being a quiet learner •self-motivated •sometimes shy	•Provide private space at home where child can work •Encourage hobbies •Provide tree houses, forts, places in nature •Respect their privacy •Go on walks •Read about heroes

KENTUCKY LEARNING GOALS	LEARNER OUTCOMES	NOT OBSERVED	BEGINNING	DEVELOPING	COMPETENT	OUTSTANDING
GOAL 1 APPLYING BASIC SKILLS	Finding and Gathering Information and Ideas	NOT OBSERVED	• begins to rely on direction to identify and use sources, tools and skills to collect information and ideas with limited accuracy	• relies on some direction to identify and use sources, tools and skills to collect information and ideas with some inaccuracies	• identifies and accurately uses sources, tools and skills to collect information and ideas (e.g., reasoning, reading, listening, etc.)	• selects and fluently uses the most appropriate sources, tools and skills to collect information and ideas
	Organizing and Manipulating Information and Ideas	NOT OBSERVED	• begins to sort, classify and display information and ideas simply with limited accuracy.	• sorts, classifies and displays information and ideas through a variety of concrete representations with some inaccuracies	•sorts, classifies and displays information and ideas accurately through pictures, symbols and / or words	• sorts, classifies and displays information and ideas in a fluent way showing patterns and complex relationships
	Expressing Information, Ideas and Emotions	NOT OBSERVED	• begins to express a basic ability to use written, oral, quantitative, physical, musical or artistic modes of expression	• demonstrates increasing ability to use written, oral, quantitative, physical, musical or artistic modes of expression to convey meaning	• competently demonstrates an ability to use written, oral, quantitative, physical, musical or artistic modes of expression to convey meaning	• demonstrates an exceptional ability to use written, oral, quantitative, physical, musical or artistic modes of expression to convey meaning
GOAL 2 CONCEPTS	Conceptual Understanding	NOT OBSERVED	• begins to explore core concepts and principles	• shows partial understanding of core concepts and principles	• applies core concepts and principles	• applies core concepts and principles deeply and broadly
GOAL 3 SELF-SUFFICIENCY	Task Commitment	NOT OBSERVED	• depends upon assistance to complete most tasks	• completes task with some assistance	•completes task/project independently with little or no assistance	• perseveres to fully complete projects in a self-directed manner demonstrating ownership of the learning
	Self-Concept	NOT OBSERVED NOT OBSERVED	• begins to have an awareness of own personal characteristics • begins to find humor in predictable situations	• recognizes own personal characteristics, possibly with some lack of acceptance • attempts to elicit humor through various forms of expression	• describes/reveals self in a positive, realistic manner • consistently uses humor as a way to convey feelings of self in positive way.	• describes/reveals self in positive relationship to others • exhibits a keen sense of humor and/or uses humor to explain complex relationships
GOAL 4 TEAM MEMBER	Cooperation	NOT OBSERVED	• begins to learn how to work with others	• works in pairs, but with limited success in larger team situations	• works consistently as a contributing member of team	• works consistently and effectively as a contributing team member in a variety of roles
	Broadened Perspectives	NOT OBSERVED NOT OBSERVED	• begins to express awareness of the rights and responsibilities of self and others • becomes aware of different points of view	• recognizes the rights and responsibilities of self and others • recognizes different points of view	• respects the rights and responsibilities of self and others •respects different points of view	•respects the rights and responsibilities of self and others and advocates fairness • seeks out different points of view
GOAL 5 PROBLEM SOLVING	Strategies	NOT OBSERVED	• begins to use methods for solving problems	• uses simple but reasonable methods for solving problems	• uses multiple steps with workable methods for solving problems	• decides upon most appropriate methods for solving problems by applying specific criteria
	Reasoning	NOT OBSERVED	• begins to give reasons for ideas	• describes ideas with logic and evidence	• explains ideas with sound logic and supporting evidence	• explains ideas with sound logic and supporting evidence, making inferences, interpretations or conclusions
	Creativity	NOT OBSERVED	• begins to retell or recreate familiar ideas with some assistance	• adds new details or elements on a familiar concept with minimal assistance	• invents unique methods and products to meet given conditions	• invents unique methods and products using imagination to go beyond given limits
GOAL 6 INTEGRATION	Connections	NOT OBSERVED NOT OBSERVED	• becomes aware of common ideas in various learning activities • becomes aware of how to relate classroom learning and life experiences to each other	• recognizes common ideas in various learning activities • recognizes situations where classroom learning and life experiences relate to each other	• integrates two or more disciplines in learning activities •links classroom learning and life experiences to each other	• focuses learning on themes • develops "what if" questions linking classroom learning and life experiences to each other
	Learning How to Learn	NOT OBSERVED	• begins to pose questions	• poses questions to explain new knowledge	• constructs new understanding through investigation and inquiry	• constructs, extends, interprets and applies new understandings through original research

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PROJECT DISCOVERY

PRIMARY PORTFOLIO TALENT GUIDE for Portfolio Assessment

OHIO VALLEY EDUCATIONAL COOPERATIVE

La Grange, Kentucky 40031

Funded through a Grant for the United States Department of Education
Jacob K. Javits Gifted and Talented Students Education Program
Project R206A20098

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STUDENT'S NAME_____SCHOOL YEAR_____

TEACHER'S NAME_____DATE_____

REFLECTION : Portfolio Assessment

The teacher will complete an interview with the student about the portfolio. By reflecting on student responses to questions about his/her work and then by assessing the child's growth as demonstrated by the portfolio, the teacher is more able to provide developmentally appropriate learning opportunities for the child.

Write the date of each entry in the appropriate box.

ENTRIES

Social Context	Writing Pieces	Art Projects	Dramatic Perform.	Self-concept Projects	Integrated Projects	Investigations	Musical Perform.	Other
Independent								
Pair								
Small Grp.								
Small Grp. with adult								
Child with adult								

Thoughts for Consideration	Comments
Child's own response to work: • What entry do you like the best? Why? • What piece would you like to know more about? What would you like to know? How could you find out? • How do you feel about your portfolio? Why? What does the portfolio show that you do well? How would you improve your work?	
What the portfolio shows about the child's development as a learner: • What are the strengths of the portfolio? • How does this child learn best? • Describe how the child's portfolio has progressed. • What experiences are needed for further development?	

Adapted from Kentucky Early Learning Profile

REVISED SEPTEMBER 27, 1993

Figure 2

Urban Scholars Program Student Interview Questions

Name of Student _____ Interviewer _____

School _____ Date _____

1. Review responses to application questions. Follow-up on answers, especially plans for work or study after graduation. What are your career goals? How do you plan to achieve them? How do your parents feel about your plans? What do they want you to do?

2. What do you like the most about school? The least? Why? What do you find most challenging about school? The least? Why?

3. Do you feel that your grades in school are a true reflection of your ability? Why? Why not?

4. Name a current event you've been interested in lately. Describe where you learned about it, i.e., tv, newspaper, magazine... Follow-up: Are there other current events that you have learned about from other sources? Why are you interested in this event?

5. What do you do in your spare time? Do you have any special interests or hobbies?

6. What do you think are your greatest strengths? Weaknesses?

7. Do you have any other major responsibilities other than work?

Problem Solving Question:

Please take your time to think about the question I will now ask you. Try to use your imagination and think of the most unusual, interesting answers you can think of. Also, don't worry about giving what you think might be the "correct" answer. In this case there is no right or wrong answer, only the most original answer you personally can give.

Pretend you are stranded on a desert island and have with you only the clothes on your back. What are a few of the most creative ways you can think of to deal with this situation?

Table 2

CHARACTERISTICS OF RURAL GIFTED STUDENTS

Advantaged Rural Gifted Students middle class children whose behaviors reflect the traditional values of the dominant culture	Disadvantaged Rural Gifted Students economically disadvantaged and/or geographically isolated children whose behaviors reflect traditional Anglo-Appalachian cultural values
1. Speak standard English	1. Speak a non-standard regional dialect
2. Are verbal and have good communication skills	2. Are less verbal in oral communication skills
3. Are active particpants in classroom activities	3. Tend to be passive participants in classroom activities
4. Perform tasks within time limitations	4. Are relatively unaffected by time pressures; work slowly but meticulously
5. Complete classroom assignments and homework	5. Are likely to be lax in completing assignments and homework
6. Perform well on standardized tests	6. Are not likely to perform well on standardized tests
7. Perform well in all subjects	7. May show exceptional ability in one subject and average to below average in others
8. Produce written work in proper grammatical form with good spelling and legible handwriting	8. Have written products that may be of high quality in content but of poor quality in grammatical form, spelling and handwriting
9. Demonstrate their strengths within the academic classroom	9. More likely to demonstrate their strengths outside the classroom, i.e., auto and tractor repair, knowledge specific to their rural environment, creativity related to 4-H projects, talent in music and the performing arts
10. Usually perform equally well on verbal and non-verbal tests.	10. Are likely to perform better on non-verbal than verbal tests.

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APPENDIX B

Checklist for Primary

Directions: Please place an X in the space beside each question which BEST describes the pupil.

		YES	NO
A.	Learning Characteristics		
1.	Has verbal behavior characterized by "richness" of expression, elaboration, and fluency.	___	___
2.	Possesses a large storehouse of information about a variety of topics beyond the usual interests of youngsters his age.	___	___
3.	Has a ready grasp of underlying principles and can quickly make valid generalizations about events, people or things; looks for similarities and differences.	___	___
4.	Tries to understand complicated material by separating it into respective parts; reasons things out for himself; sees logical and common sense answers.	___	___
B.	Motivational Characteristics		
1.	Is easily bored with routine tasks.	___	___
2.	Prefers to work independently; needs minimal direction from teachers.	___	___
3.	Has a tendency to organize people, things and situations.	___	___
4.	Is positive and zealous in his beliefs.	___	___
C.	Leadership Characteristics		
1.	Carries responsibility well; follows through with tasks and usually does them well.	___	___
2.	Seems respected by his classmates.	___	___
3.	Is self-confident with children his own age as well as adults; seems comfortable when asked to show his work to the class.	___	___
4.	Is shy, responding generally when called upon.	___	___
5.	Is "bossy" with his peers.	___	___

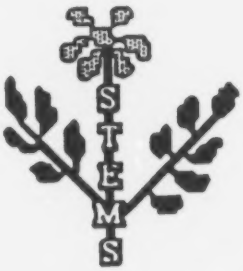
*Taken and adapted from materials prepared for Dade County, Florida lic Schools, Mr. James Miley, Coordinator of the Gifted.

Figure 4

S.T.E.M.S. Observation of Gifted/Talented Characteristics

S.T.E.M.S.

Observation of Gifted/Talented Characteristics



Teacher: _____

Grade: _____

Lesson # _____ Look for:_____

Date: _____

Directions: 1)List names of students who are to be observed.
2)Place a tally mark under the appropriate column EACH time that behavioral characteristic is observed during that lesson.

	LOOK AND LISTEN FOR STUDENTS WHO:	STUDENT NAMES				
A	Have an unusually advanced vocabulary for their age. Conversation reveals richness of expression, imagery, elaboration and fluency.					
B	Communicate well with others in group activities.					
C	Become absorbed in topics, problems or tasks. Are persistent in task completion.					
D	Prefer to work independently. Require little direction from teachers.					
E	Generate a large number of ideas or solutions to problems and questions.					
F	Are high risk takers.					
G	Are creative in finding ways to communicate: drawing, pantomime, body language.					
H	Demonstrate some exceptional ability in some area of the arts or athletics.					
I	Improvise with commonplace materials to create original and unusual products.					
J	Seem to enjoy being around other people. They are sociable and prefer not to be alone.					

Figure 2

Checklist for Identifying Learning Strengths

CHECKLIST FOR IDENTIFYING LEARNING STRENGTHS

Child's name _____ Teacher _____

Grade _____ Date _____

Write the number (1 - 5) that most closely represents your overall observations of this child in each intelligence. You may check any behavior(s) you feel is (are) particularly strong for that child. Please add any comments you believe will help another teacher plan for this child.

1 - You have not observed these behaviors.
2 - You have occasionally observed them
3 - You have usually observed them.
4 - You almost always or always observed them.
5 - No opportunity to observe these behaviors

LINGUISTIC ____ (overall rating)

1. Enjoys word play; chooses to memorize and recite poems, tongue twisters, puns, riddles, etc.
2. Starts conversations or discussions on his/her own.
3. Expresses ideas easily either orally or in writing. Is a good story teller or writer.
4. Can give several meanings when describing an object or idea (e.g., how an object looks, how it's used.
5. Remembers and describes new ideas.
6. Readily verbalizes background knowledge and factual information.
7. Asks many questions.
8. Talks through problems; explains solutions.
9. Shows verbal ability in English, considering another language is used in the home.
10. Uses advanced vocabulary for age.

LOGICAL-MATHEMATICAL ____ (overall rating)

1. Chooses to play or work with number activities.
2. Finds number patterns or geometric patterns in the environment (e.g., tiles, flowers, leaves).
3. Joins smaller ideas into larger ones.
4. Can provide specific examples to support a generalization.
5. Finds ways to work through an unfamiliar number problem using own plan or strategy
6. Is able to plan or describe steps or events in order.
7. Groups objects and ideas in a variety of ways: finds similarities and differences.
8. Uses a systematic approach to problem solving.
9. Assembles puzzles with skill and enjoyment.

BODILY-KINESTHETIC ____ (overall rating)

1. Chooses motor skills (e.g., skipping, balancing, jumping).
2. Mirrors or repeats movements easily.
3. Readily masters hand (clap) patterns or steps.
4. Develops large muscle (gross motor) skills easily (e.g., roller skating, jumping rope).
5. Develops small muscle (fine motor) skills easily (e.g., tying shoes before kindergarten, draws unusually well for age).
6. Tries to master a new physical skill independently.
7. Prefers to touch and explore the shape of objects in order to learn about them.

Figure 2 continued

SPATIAL ____ (overall rating)

1. Chooses to express ideas through visual media or through interactions with objects in the environment.
2. Constructs and designs visual patterns.
3. Puts things together imaginatively to form a construction (e.g., collage, sculpture).
4. Shows an understanding of physical perspective.
5. Takes things apart and can put them back together (e.g., puzzle or mechanical objects).
6. Can organize and group objects.
7. Shows artistic appreciation: responds to color, line, texture.
8. Carefully plans use of space on paper.
9. Puts relevant details in drawings.

INTERPERSONAL ____ (overall rating)

1. Eager participant in group activities.
2. Initiates or makes offers of peer tutoring.
3. Meets own needs through adults and other people.
4. Expresses feelings to others.
5. Shows leadership; organizes activities including other children.
6. Chosen by others to help or join a group.
7. Easily builds relationships with others.
8. Shows strong sense of fairness in the interest of the group.

INTRAPERSONAL ____ (overall rating)

1. Self motivated, independent and resourceful.
2. Accepts ownership for one's behavior.
3. Self confident.
4. Empathizes with other children.
5. Has sense of humor.
6. Can laugh at oneself.
7. Sticks to ones beliefs.
8. Takes risks.
9. Concentrates on topics or tasks.
10. Plays creatively.
11. Persistent in self selected activity.

MUSICAL ____

1. Chooses musical activities.
2. Reproduces a newly heard melody or rhythm.
3. Composes rhythms, patterns, melodies.
4. Sings on key.
5. Identifies musical instruments heard in a musical composition.
6. Plays musical selections by ear.
7. Sings or hums melodically during independent activities.
8. Experiments with objects to create different sounds.

Comments:

_____

_____

_____

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Summary Sheet

Scales for Rating the Behavioral Characteristics of Superior Students

Joseph S. Renzulli / Linda H. Smith / Alan J. White / Carolyn M. Callahan / Robert K. Hartman

Name _____ Date _____

School _____ Grade _____ Age _____

Teacher or person completing this form _____

How long have you known the child? _____ Months.

Directions. These scales are designed to obtain teacher estimates of a student's characteristics in the areas of learning, motivation, creativity, leadership, art, music, drama, communication and planning. The items are derived from the research literature dealing with characteristics of gifted and creative persons. It should be pointed out that a considerable amount of individual differences can be found within this population; and therefore, the profiles are likely to vary a great deal. Each item in the scales should be considered separately and should reflect the degree to which you have observed the presence or absence of each characteristic. Since the 10 dimensions of the instrument represent relatively different sets of behaviors, the scores obtained from the separate scales should not be summed to yield a total score. Please read the statements carefully and place an X in the appropriate place according to the following scale of values:

1. If you have seldom or never observed this characteristic.
2. If you have observed this characteristic occasionally.
3. If you have observed this characteristic to a considerable degree.
4. If you have observed this characteristic almost all of the time.

Space has been provided following each item for your comments.

Scoring. Separate scores for each of the ten dimensions may be obtained as follows:

— Add the total number of X's in each column to obtain the "Column Total."
— Multiply the Column Total by the "Weight" for each column to obtain the "Weighted Column Total."
— Sum the Weighted Column Totals across to obtain the "Score" for each dimension of the scale.
— Enter the Scores below.

I	Learning Characteristics	_____
II	Motivational Characteristics	_____
III	Creativity Characteristics	_____
IV	Leadership Characteristics	_____
V	Artistic Characteristics	_____
VI	Musical Characteristics	_____
VII	Dramatics Characteristics	_____
VIII	Communication Characteristics — Precision	_____
IX	Communication Characteristics — Expressiveness	_____
X	Planning Characteristics	_____

Creative Learning Press, Inc.
P.O. Box 320, Mansfield Center, Connecticut 06250

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Scales for Rating the Behavioral Characteristics of Superior Students

Joseph S. Renzulli / Linda H. Smith / Alan J. White / Carolyn M. Callahan / Robert K. Hartman

Name _____ Date _____

School _____ Grade _____ Age _____

Teacher or person completing this form _____

How long have you known the child? _____ Months.

Part II: Motivational Characteristics

	— Seldom or never	— Occasionally	— Considerably	— Almost always
1. Becomes absorbed and truly involved in certain topics or problems; is persistent in seeking task completion. (It is sometimes difficult to get him to move on to another topic.)	☐	☐	☐	☐
2. Is easily bored with routine tasks.	☐	☐	☐	☐
3. Needs little external motivation to follow through in work that initially excites him.	☐	☐	☐	☐
4. Strives toward perfection; is self critical; is not easily satisfied with his own speed or products.	☐	☐	☐	☐
5. Prefers to work independently; requires little direction from teachers.	☐	☐	☐	☐
6. Is interested in many "adult" problems such as religion, politics, sex, race — more than usual for age level.	☐	☐	☐	☐
7. Often is self assertive (sometimes even aggressive); stubborn in his beliefs.	☐	☐	☐	☐
8. Likes to organize and bring structure to things, people, and situations.	☐	☐	☐	☐
9. Is quite concerned with right and wrong, good and bad; often evaluates and passes judgment on events, people, and things.	☐	☐	☐	☐
Add Column Total	☐	☐	☐	☐
Multiply by Weight	1	2	3	4
Add Weighted Column Totals	☐ >	☐ >	☐ >	☐
Total				☐

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Scales for Rating the Behavioral Characteristics of Superior Students

Joseph S. Renzulli / Linda H. Smith / Alan J. White / Carolyn M. Callahan / Robert K. Hartman

Name _____ Date _____

School _____ Grade _____ Age _____

Teacher or person completing this form _____

How long have you known the child? _____ Months.

Part IV: Leadership Characteristics

	_ Seldom or never	_ Occasionally	_ Considerably	_ Almost always
1. Carries responsibility well; can be counted on to do what he has promised and usually does it well.	☐	☐	☐	☐
2. Is self confident with children his own age as well as adults; seems comfortable when asked to show his work to the class.	☐	☐	☐	☐
3. Seems to be well liked by his classmates.	☐	☐	☐	☐
4. Is cooperative with teacher and classmates; tends to avoid bickering and is generally easy to get along with.	☐	☐	☐	☐
5. Can express himself well; has good verbal facility and is usually well understood.	☐	☐	☐	☐
6. Adapts readily to new situations; is flexible in thought and action and does not seem disturbed when the normal routine is changed.	☐	☐	☐	☐
7. Seems to enjoy being around other people; is sociable and prefers not to be alone.	☐	☐	☐	☐
8. Tends to dominate others when they are around; generally directs the activity in which he is involved.	☐	☐	☐	☐
9. Participates in most social activities connected with the school; can be counted on to be there if anyone is.	☐	☐	☐	☐
10. Excels in athletic activities; is well coordinated and enjoys all sorts of athletic games.	☐	☐	☐	☐
Add Column Total	☐	☐	☐	☐
Multiply by Weight	1	2	3	4
Add Weighted Column Totals	☐ >	☐ >	☐ >	☐
Total				☐

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Scales for Rating the Behavioral Characteristics of Superior Students

Joseph S. Renzulli / Linda H. Smith / Alan J. White / Carolyn M. Callahan / Robert K. Hartman

Name _____ Date _____

School _____ Grade _____ Age _____

Teacher or person completing this form _____

How long have you known the child? _____ Months.

Part VI. Musical Characteristics

	— Seldom or never	— Occasionally	— Considerably	— Almost always
1. Shows a sustained interest in music — seeks out opportunities to hear and create music.	☐	☐	☐	☐
2. Perceives fine differences in musical tone (pitch, loudness, timbre, duration.)	☐	☐	☐	☐
3. Easily remembers melodies and can produce them accurately.	☐	☐	☐	☐
4. Eagerly participates in musical activities.	☐	☐	☐	☐
5. Plays a musical instrument (or indicates a strong desire to).	☐	☐	☐	☐
6. Is sensitive to the rhythm of the music; responds through body movements to changes in the tempo of the music.	☐	☐	☐	☐
7. Is aware of and can identify a variety of sounds heard at a given moment — is sensitive to "background" noises, to chords that accompany a melody, to the different sounds of singers or instrumentalists in a performance.	☐	☐	☐	☐
Add Column Total	☐	☐	☐	☐
Multiply by Weight	1	2	3	4
Add Weighted Column Totals	☐ >	☐ >	☐ >	☐
Total				☐

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Scales for Rating the Behavioral Characteristics of Superior Students

Joseph S. Renzulli / Linda H. Smith / Alan J. White / Carolyn M. Callahan / Robert K. Hartman

Name _____ Date _____

School _____ Grade _____ Age _____

Teacher or person completing this form _____

How long have you known the child? _____ Months.

Part VIII: Communication Characteristics — Precision

	— Seldom or never	— Occasionally	— Considerably	— Almost always
1. Speaks and writes directly and to the point.	☐	☐	☐	☐
2. Modifies and adjusts expression of ideas for maximum reception.	☐	☐	☐	☐
3. Is able to revise and edit in a way which is concise, yet retains essential ideas.	☐	☐	☐	☐
4. Explains things precisely and clearly.	☐	☐	☐	☐
5. Uses descriptive words to add color, emotion, and beauty.	☐	☐	☐	☐
6. Expresses thoughts and needs clearly and concisely.	☐	☐	☐	☐
7. Can find various ways of expressing ideas so others will understand.	☐	☐	☐	☐
8. Can describe things in a few very appropriate words.	☐	☐	☐	☐
9. Is able to express fine shades of meaning by use of a large stock of synonyms.	☐	☐	☐	☐
10. Is able to express ideas in a variety of alternate ways.	☐	☐	☐	☐
11. Knows and can use many words closely related in meaning.	☐	☐	☐	☐
Add Column Total	☐	☐	☐	☐
Multiply by Weight	1	2	3	4
Add Weighted Column Totals	☐ >	☐ >	☐ >	☐
Total				☐

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P.O. Box 320 Mansfield Center, Connecticut 06250

Scales for Rating the Behavioral Characteristics of Superior Students

Joseph S. Renzulli / Linda H. Smith / Alan J. White / Carolyn M. Callahan / Robert K. Hartman

Name _____ Date _____

School _____ Grade _____ Age _____

Teacher or person completing this form _____

How long have you known the child? _____ Months.

Part X: Planning Characteristics

	— Seldom or never	— Occasionally	— Considerably	— Almost always
1. Determines what information or resources are necessary for accomplishing a task.	☐	☐	☐	☐
2. Grasps the relationship of individual steps to the whole process.	☐	☐	☐	☐
3. Allows time to execute all steps involved in a process.	☐	☐	☐	☐
4. Foresees consequences or effects of actions.	☐	☐	☐	☐
5. Organizes his or her work well.	☐	☐	☐	☐
6. Takes into account the details necessary to accomplish a goal.	☐	☐	☐	☐
7. Is good at games of strategy where it is necessary to anticipate several moves ahead.	☐	☐	☐	☐
8. Recognizes the various alternative methods for accomplishing a goal.	☐	☐	☐	☐
9. Can pinpoint where areas of difficulty might arise in a procedure or activity.	☐	☐	☐	☐
10. Arranges steps of a project in a sensible order or time sequence.	☐	☐	☐	☐
11. Is good at breaking down an activity into step by step procedures.	☐	☐	☐	☐
12. Establishes priorities when organizing activities.	☐	☐	☐	☐
13. Shows awareness of limitations relating to time, space, materials, and abilities when working on group or individual projects.	☐	☐	☐	☐
14. Can provide details that contribute to the development of a plan or procedure.	☐	☐	☐	☐
15. Sees alternative ways to distribute work or assign people to accomplish a task.	☐	☐	☐	☐
Add Column Total	☐	☐	☐	☐
Multiply by Weight	1	2	3	4
Add Weighted Column Totals	☐ >	☐ >	☐ >	☐

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Hilliard
Parent
Teacher

"O"

Name_____Age_____Grade_____

Male_____Female_____School_____

Circle each statement that fits your child.

1. Is always getting excited about new things.
2. Is really funny sometimes.
3. Is good at fooling people(shining people on).
4. Has a quick temper.
5. Can make stories really interesting.
6. Can make up good stories.
7. Has lots of different ideas.
8. Can tell some of the biggest fibs (lies).
9. Always tries new styles of clothes.
10. Likes to use different or new words.
11. Is very impatient.
12. Can really dance.
13. Can talk to grown-ups easily (is not afraid to talk to grown-ups).
14. Is good at making things up like games, dances, jokes, music, and pictures.
15. Knows the words to lots of songs.
16. Gets along well with all different kinds of people.

"WHO"

Think about the students in your class. Answer each item with only ONE student's name. If you can not think of anyone for a given question, leave the question blank. A child's name may be used on any number of items, but only one child per item.

1. Who is always getting excited about new things?
2. Who is really funny sometimes?
3. Who is good at fooling people ("shining people on")?
4. Who has a quick temper?
5. Who can make stories really interesting?
6. Who can make up good stories?
7. Who has lots of different ideas?
8. Who can tell some of the biggest fibs (lies)?
9. Who always tries new styles of clothes?
10. Who likes to use different or new words?
11. Who is very impatient?
12. Who can really dance?
13. Who can talk to grown-ups easily (is not afraid to talk to grown-ups)?
14. Who is good at making things up like: games, dances, jokes, music, and pictures?
15. Who knows the words to lots of songs?
16. Who gets along well with all different kinds of people?

Figure 1

Urban Scholars Program Nomination Form

Name _____ **Position** _____

Organization/School _____ **Telephone #** _____

Please list below the name of a student who you feel has demonstrated traits such as creativity, critical thinking, leadership, or a high degree of curiosity and high motivation and exceptional potential for success in specific academic areas. -

Student's Name _____ **Grade** _____

Area(s) of Strength _____

The following is a partial list of traits which may indicate that a student is gifted or talented. No one will exhibit all of the traits. For the student listed above, check those traits which you feel best describe him/her.

___ Is curious

___ Displays logical thinking skills

___ Has a keen sense of humor

___ Learns quickly through experience

___ Is talented in the arts (art, music, drama, dance...)

___ Is creative and original in his/her thinking

___ Is quite concerned with issues of right and wrong

___ Appears to put a great deal of energy into one area of ability while neglecting other areas/subjects

___ Makes unusual, creative, or "off the beaten track" statements

___ Is not easily satisfied with own speed or products

___ Gets along better with teacher of older students

___ Has won a prize or mention in a competition or contest

___ Is self-critical, sometimes highly self-critical

___ Has a large vocabulary

___ Is independent in thought and action

___ Takes initiative

___ Enjoys discussion classes

___ Sets high goals and ideals

___ Shows leadership ability in his/her peer group

___ Generally does average school work, but seems capable of doing a lot better

___ Can become so absorbed in a topic that s/he doesn't want to move to other topics

___ Is inconsistent in school work, but seems capable of doing a lot better

___ Is bored with routine but gets engrossed in challenging work

___ Often evaluates and passes judgements on events and people

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SCALE FOR NON-CONFORMING STUDENTS

	Does not apply / not sure	Never	Some-times	Fre-quent-ly
1. Quiet, serious, may be withdrawn.	0	1	2	3
2. Disinterested in schools.	0	1	2	3
3. Subtle sense of humor/zany ideas.	0	1	2	3
4. Has an expressive vocabulary.	0	1	2	3
5. Likes independent projects.	0	1	2	3
6. Stubborn or resistant to conforming.	0	1	2	3
7. Achieves highly in areas of interest.	0	1	2	3
8. Doesn't do assignments but sometimes does well on tests.	0	1	2	3
9. Idealistic, sometimes skeptical or cynical.	0	1	2	3
10. Rebellious attitude.	0	1	2	3
11. Reads a wide variety of material.	0	1	2	3
12. Clever in making or repairing things.	0	1	2	3
13. Concerned with social issues.	0	1	2	3
14. Likes to follow maps or read charts.	0	1	2	3
15. Original in approach, may reject traditional.	0	1	2	3
16. Responds to "far out" ideas.	0	1	2	3
17. Has many ideas.	0	1	2	3
18. Alienated from teachers and peers (except for one or two).	0	1	2	3
19. Resistant to drill repetition or "busywork."	0	1	2	3
20. Dislikes regimentation.	0	1	2	3
21. Bored by simplistic explanations.	0	1	2	3
22. Receptive to unusual ideas.	0	1	2	3
23. Persistent or stubborn.	0	1	2	3
24. Generally low self-concept, but may act "cocky."	0	1	2	3
25. Asks "hardnosed" questions.	0	1	2	3
26. Low achiever but could do better	0	1	2	3
27. Probes to heart or core of a problem.	0	1	2	3
28. Likes new ways of doing things.	0	1	2	3
29. Resists interruptions.	0	1	2	3
30. Interested in brainstorming.	0	1	2	3
31. Invests own systems/methods of improving old ways of doing things.	0	1	2	3
32. Invents schemes or ways of skirting rules or regulations.	0	1	2	3

ADDITIONAL COMMENTS

SCALE FOR CONFORMING STUDENTS

School _____ Teacher _____

Grades and/or Subjects Taught _____

Pupil's Name _____ Date _____

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	Does not apply / not sure	Never	Some-times	Fre-quent-ly
1. Displays a great deal of curiosity about many things.	0	1	2	3
2. Generates and supplies ideas of solutions to problems and questions.	0	1	2	3
3. Is a high risk taker; i.e. adventurous and speculative.	0	1	2	3
4. Shows ability beyond grade level in written expression.	0	1	2	3
5. Shows evidence of independent reading for information and pleasure.	0	1	2	3
6. Has unusually advanced vocabulary for age or grade level.	0	1	2	3
7. Possesses a large storehouse of information about a variety of topics (beyond the usual interests of youngsters his/her age).	0	1	2	3
8. Has rapid insight into cause/effect relationships; tries to discover the how and the why of things; wants to know what makes things (or people) "tick."	0	1	2	3
9. Requires little direction from teachers; prefers to work independently.	0	1	2	3
10. Well liked by his/her classmates.	0	1	2	3
11. Seems to enjoy being around other people; is sociable and prefers not to be alone.	0	1	2	3
12. Participates in most activities connected with the school; can be counted on to be there if anyone is.	0	1	2	3
13. Gives very alert, rapid answers.	0	1	2	3
14. Acts as a leader among children of his/her age group.	0	1	2	3
15. Relates information gained in the past to new knowledge that the student acquires.	0	1	2	3
16. Shows more interest in creative effort and new activities than in routine and repetitive tasks.	0	1	2	3
17. Tries to excel in almost everything attempted.	0	1	2	3
18. Figures out his/her own solutions to problems and shows common sense.	0	1	2	3
19. Has a sense of humor.	0	1	2	3
20. Shows an intense interest in some artistic activity such as drawing, singing, dancing, writing, playing a musical instrument.	0	1	2	3
21. Makes up stories that are vivid and dramatic or relate experiences with a great deal of exact detail.	0	1	2	3
22. Likes puzzles and various kinds of "problem" games.	0	1	2	3
23. Has exceptional ability in mathematics.	0	1	2	3
24. Shows and unusual interest in science or mechanics.	0	1	2	3
25. Shows an awareness of things that are new or novel.	0	1	2	3

TORRANCE: CREATIVE POSITIVES OF DISADVANTAGED CHILDREN

Name _____ Date _____

School _____ Grade _____ Birthdate _____

Teacher _____

Directions: Check the statements which describe this child.

1. ability to express feelings and emotions
2. ability to improvise with commonplace materials
3. articulateness, skill in role playing and storytelling
4. enjoyment of and ability in visual art
5. enjoyment of and ability in creative movement, dance, dramatics, etc.
6. enjoyment of and ability in music, rhythm
7. expressive speech
8. fluency and flexibility in non-verbal media (figural, spatial, etc.)
9. enjoyment of and skills in small group activities, problem-solving
10. responsiveness to the concrete (objects, action, models, etc.)
11. responsiveness to the kinesthetic (movement)
12. expressiveness of gestures, body language, etc., and ability to "read" body language
13. enjoyment of and ability to use humor
14. richness of imagery in informal language
15. originality or unusualness of ideas in problem-solving
16. problem-centeredness, persistence in working on relevant problems
17. emotional responsiveness, mutual support
18. quickness of warm-up

APPENDIX C

The Williams Scale

A PARENT AND TEACHER RATING SCALE OF CHILDREN'S DIVERGENT THINKING AND FEELING RELATED TO CREATIVITY

Child's Name_____ Date_____ Grade_____

School_____ Age_____ yrs. mos.

Person completing scale_____ Relationship to child_____

How long have you known the child?_____

DIRECTIONS FOR USING THE SCALE

Check the appropriate box beside each item which best describes the child's behavior.

Often	Sometimes	Seldom	
			FLUENCY
☐	☐	☐	The child thinks of several answers when a question is asked.
☐	☐	☐	The child draws several pictures when asked to draw one.
☐	☐	☐	The child has several ideas about something instead of just one.
☐	☐	☐	The child asks many questions.
☐	☐	☐	The child uses a large number of words when expressing ideas.
☐	☐	☐	The child works rapidly and produces a great deal.
			FLEXIBILITY
☐	☐	☐	The child thinks of many ways to use an object rather than its common use.
☐	☐	☐	The child expresses more than one meaning for a picture, story, poem, or problem.
☐	☐	☐	The child can transfer meaning in one subject to another subject.
☐	☐	☐	The child shifts his point of view to another point of view.
☐	☐	☐	The child exhibits a variety of ideas and explores many of them.
☐	☐	☐	The child thinks of numerous possibilities for solving a problem.

Often	Sometimes	Seldom	
			ORIGINALITY
☐	☐	☐	The child likes objects in a room placed off-center or prefers drawings and designs which are asymmetrical.
☐	☐	☐	The child becomes dissatisfied with one right answer and seeks other options.
☐	☐	☐	The child thinks in uncommon ways.
☐	☐	☐	The child enjoys the unusual and dislikes ordinary ways of doing things.
☐	☐	☐	The child, after having read or heard about a problem, begins inventing solutions.
☐	☐	☐	The child questions established methods and devises new methods of problem solution.
			ELABORATION
☐	☐	☐	The child adds lines, color, and details to his/her drawing.
☐	☐	☐	The child senses a deeper meaning in an answer or solution and produces more depth of meaning.
☐	☐	☐	The child takes off with another's idea and alters it in some way.
☐	☐	☐	The child wants to "jazz-up" or embellish the work or ideas of others.
☐	☐	☐	The child has little interest in ordinary objects and adds details to make them better.
☐	☐	☐	The child changes the rules of games.
			CURIOSITY
☐	☐	☐	The child questions everything and everybody.
☐	☐	☐	The child loves to explore mechanical things.
☐	☐	☐	The child is constantly searching for new avenues of thinking.
☐	☐	☐	The child normally explores things and ideas which are new to him.
☐	☐	☐	The child is alert to possibilities for solutions.
☐	☐	☐	The child explores books, games, maps, pictures, etc., to find more meaning.

Often	Sometimes	Seldom	
			IMAGINATION
☐	☐	☐	The child makes up stories about places never seen.
☐	☐	☐	The child imagines how others would deal with a problem.
☐	☐	☐	The child daydreams about things or places.
☐	☐	☐	The child likes to imagine things he has never experienced.
☐	☐	☐	The child sees things in pictures or drawings other than the obvious.
☐	☐	☐	The child can wonder freely about things and ideas.
			COMPLEXITY
☐	☐	☐	The child is interested in intricate things and ideas.
☐	☐	☐	The child likes to involve himself in complicated tasks.
☐	☐	☐	The child wants to figure things out without assistance.
☐	☐	☐	The child enjoys tasks that are difficult.
☐	☐	☐	The child thrives on trying again and again in order to succeed.
☐	☐	☐	The child produces more complex solutions to problems than seem necessary.
			RISK-TAKING
☐	☐	☐	The child will defend ideas regardless of the reactions of others.
☐	☐	☐	The child sets high goals of accomplishment and is not afraid to try to achieve them.
☐	☐	☐	The child admits to mistakes or failures.
☐	☐	☐	The child likes trying new things or ideas and is not easily influenced by friends.
☐	☐	☐	The child is not overly concerned with disapproval by classmates, teachers or parents.
☐	☐	☐	The child prefers taking chances or "dares" just to learn of the outcomes.

Following are four open-ended questions which will allow you an opportunity to express your reactions about the child and a program in school for creative children. Make your statements brief but specific.

1. Do you think this child is or may be bright?_____Yes_____No (check one)

   If yes, why?_____

   _____

   _____

   If no, why?_____

   _____

   _____

2. Do you think this child is or may be creative?_____Yes_____No (check one)

   If yes, report briefly what he or she does in a creative way_____

   _____

   _____

   If no, why not?_____

   _____

   _____

3. What do you expect of a <u>school</u> <u>program</u> for creative children?_____

   _____

   _____

   _____

   _____

   _____

4. What would you like to see a child accomplish as a result of participation in a program for creative children?_____

   _____

   _____

   _____

   _____

   _____

TORRANCE TEST OF CREATIVITY

DATE:_____

NAME:_____ AGE:_____

SCHOOL: _____ GRADE :_____

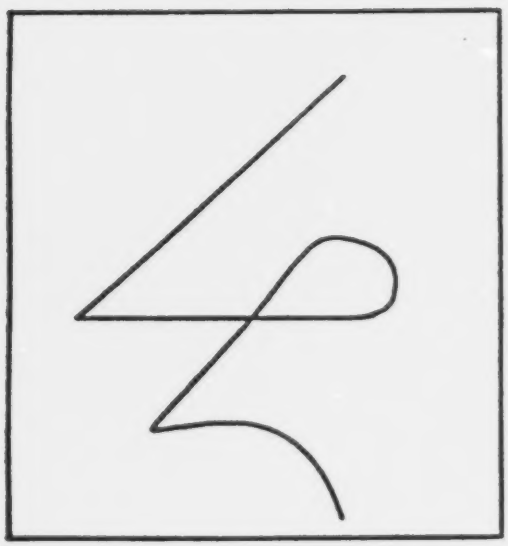
Activity **UNUSUAL USES (Cardboard Boxes)**

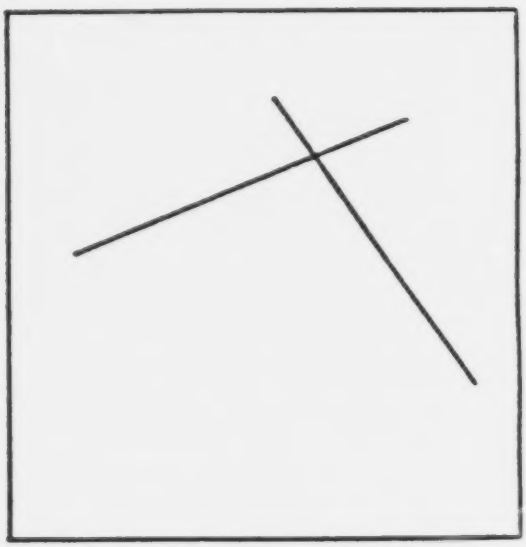
Most people throw their empty cardboard boxes away, but they have thousands of interesting and unusual uses. In the spaces below and on the next page, list as many of these interesting and unusual uses as you can think of. Do not limit yourself to any one size of box. You may use as many boxes as you like. Do not limit yourself to the uses you have seen or heard about; think about as many possible new uses as you can.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____
21. _____
22. _____
23. _____

Activity 2

Make some pictures from the incomplete figures below. Try to think of pictures that others will not think of. Make your pictures communicate as interesting and as complete a story as possible. Make up titles for your pictures. Work for 5 minutes.





Activity 3

See how many objects or pictures you can make from the triangles below just as you did with the incomplete figures. Work for 5 minutes. Don't forget to add labels or titles.

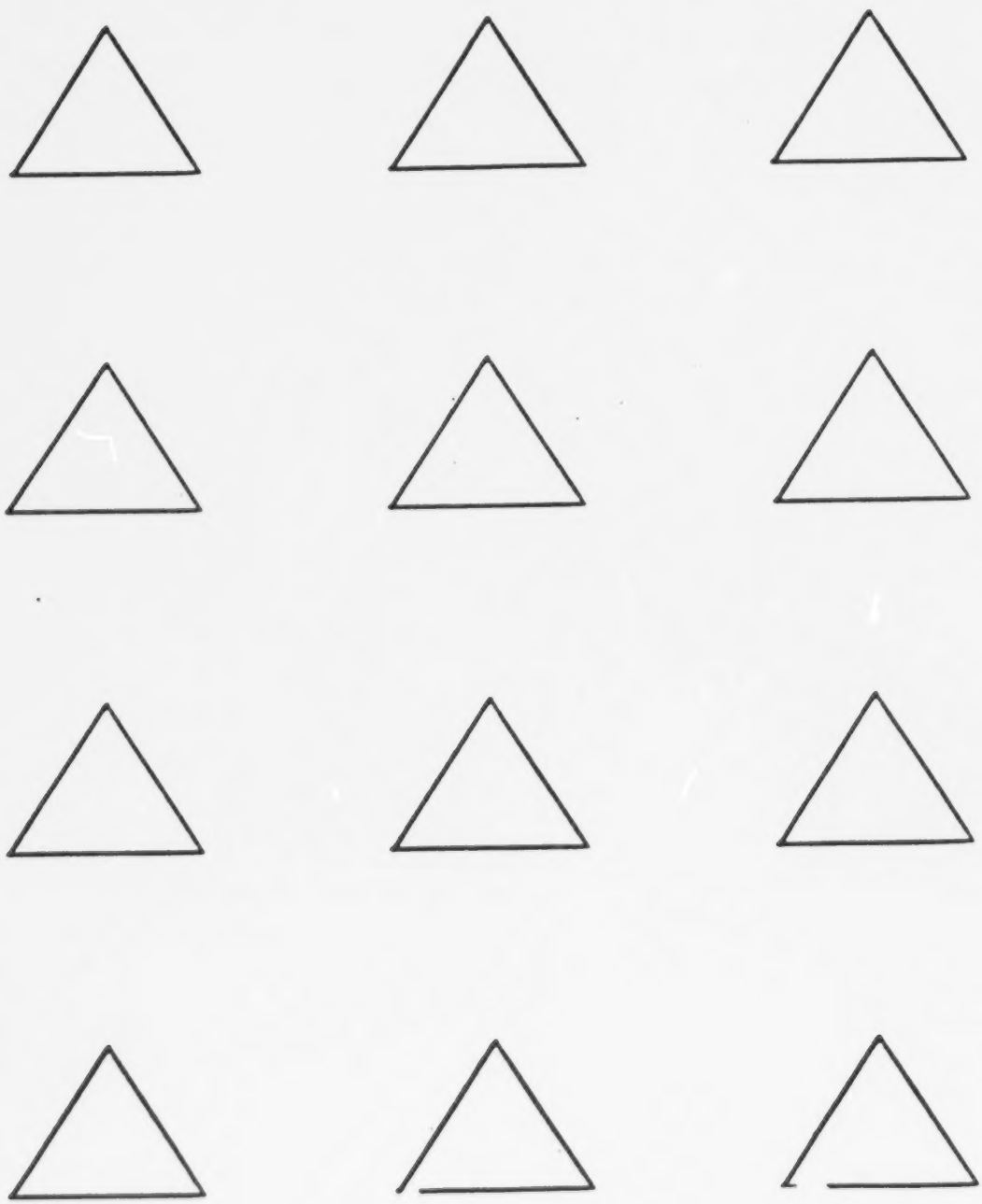


Figure 1

Bayonne School District Gifted and Talented Program Art Component

Student's Name_____ Grade as of the following September _____

Teacher/Evaluator_____ Date_____

DIRECTIONS: In reviewing the student's portfolio, check the column YES or NO as it applies:

		YES	NO
1.	Portfolio was presented.		
2.	Shows sequential improvement.		
3.	Work is original (ask student).		
4.	Work is two-dimensional (drawing/painting skills).		
5.	Work is three-dimensional (craft/manipulative skills).		
6.	Work shows a feel for or a knowledge of the concepts of design (color, line, shape, composition, form).		
7.	Work displays a variety of media/techniques.		

Comments:_____

DIRECTIONS: Please check the column YES or NO as it applies to the student's on-site assignment.

		YES	NO
1.	Project completed in time allotted.		
2.	Student takes art work seriously.		
3.	Quickly grasps and uses steps in process when instructed.		
4.	Student's work displays aesthetic qualities.		
5.	Student's work shows a feel for a knowledge of the concepts of design (color, line, shape, composition, form).		

DIRECTIONS: Based on all the information you have gathered, please answer the following questions by checking the appropriate column.

		YES	NO
1.	Does the student display an interest for/ability in art?		
2.	Would the student benefit from additional are experiences?		

Comments: (optional)_____

_____

MUSIC PROGRAM IDENTIFICATION

A locally developed instrument for identifying musical talent is administered by two state certified music teachers who are present during the student's interview and the audition. Discussion among these experts, the principal and the director of the magnet school provides the forum at which the child's music potential is assessed.

Figure 2

Bayonne School District Gifted and Talented Program Music Component

Student's Name_____ Grade as of the following September _____

Teacher/Evaluator_____ Date

DIRECTIONS: In reviewing the student's written work, check the column YES or NO.

	YES	NO
The student has a comfortable knowledge or understanding of (1-9):		
1. Rhythm		
2. Meter		
3. Note Value		
4. Measure		
5. Scale		
6. Clef		
7. Sharps/Flats		
8. Notation Levels		
9. Music Vocabulary		
10. The student's interpretation exhibits aesthetic qualities		

DIRECTIONS: While students are doing the written form, call them up one at a time for the performance part. Check the appropriate column.

EXERCISES	YES	NO
1. Clap out rhythm pattern (alone, with teacher)		
2. Recognize and reproduce pitch (high, low, same)		
3. Exhibit tonal memory		
4. Display a feeling for harmony (through round, 2-part harmony with teacher)		

PREPARED PIECE VOCAL INSTRUMENTAL

Name of piece_____

Quality Excellent Good Poor
(Circle one)

ASSIGNED PIECE VOCAL INSTRUMENTAL

Name of piece_____

Quality Excellent Good Poor
(Circle one)

DIRECTIONS: Based on all the information you have gathered, please answer the following questions by checking the appropriate column.

	YES	NO
1. Student takes music seriously		
2. Student exhibits good time-on-task skills		
3. Student's work displays aesthetic qualities		
4. Student's work exhibits a feel for of knowledge of the elements of music.		
5. Student's body language displays musical expression		
6. Does the student display an interest for/ability in music?		
7. Would the student benefit from additional musical experiences?		

Comments: (optional)_____

_____

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ArtsConnection

Key Words and Definitions for Identification of Talent In Dance

These concepts are being used to help focus the observer on some of the characteristics, processes and connections which can be recognized in students participating in a dance workshop. These are not exclusive definitions. Many of these behaviors overlap and may be functioning simultaneously in the fully involved dancer.

The focus of the workshops will change from week to week to allow students to demonstrate their full range of talents and to learn new skills which will help them express their own artistic nature.

SKILLS

1> Physical Control
knows by feeling
can make adjustments
can balance on one leg
has strength in legs, arms, torso
can maintain corrections

2> Coordination and Agility
can combine movements
executes complex locomotor patterns
can isolate body parts from each other
moves freely through space
responds quickly

3> Spatial Awareness
is aware of other people
adjusts to other dancers and the space
evens up the circle or line
is accurate in time and space

4> Recall and Observation
remembers information
can perform without following
can see and replicate movements accurately
can build sequences
observes details

5> Rhythm
puts the beat in the body
repeats rhythmic patterns accurately
anticipates, waits for proper moment to begin
can find the underlying pulse or beat

MOTIVATION

6> Ability to Focus
directs attention
makes full commitment to the movement
is interested and involved in class
cooperates in team exercises

7> Perseverance
doesn't give up easily
practices
improves over time
takes time to think
tries hard to get it right

CREATIVITY

8> Expressiveness
shows pleasure in movement
performs with energy and intensity
is fully involved
communicates feelings
projects self

9> Movement qualities
displays a range of dynamics
communicates subtlety
moves fully
connects body parts
has a feel for timing

10> Improvisation
responds spontaneously
uses focus to create reality
gives surprising or unusual answers
makes independent decisions

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Dance Identification Instrument

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NAME_____ #_____ CLASS_____ SCHOOL_____

WEEK	1	2	3	4	5	6	7
PHYSICAL CONTROL							
COORDINATION/AGILITY							
SPATIAL AWARENESS							
RECALL AND OBSERVATION							
RHYTHM							
ABILITY TO FOCUS							
PERSEVERANCE							
EXPRESSIVENESS							
MOVEMENT QUALITIES							
IMPROVISATION							
SELECTION (1/2/3)							
TOTAL SKILLS							
TOTAL MOTIVATION							
TOTAL CREATIVE							

FIELD TEST VERSION

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DANCE IDENTIFICATION TALLY SHEET
Talent Beyond Words

CONTROL /COORD E L/OBSERV THM FOCUS PERSEV EXPRESS MOVQUAL IMPROV	PHYS CONTROL AGIL/COORD SPACE RECALL/OBSERV RHYTHM FOCUS PERSEV EXPRESS MOVQUAL IMPROV	PHYS CONTROL AGIL/COORD SPACE RECALL/OBSERV RHYTHM FOCUS PERSEV EXPRESS MOVQUAL IMPROV
CONTROL /COORD E LL/OBSERV M FOCUS PERSEV EXPRESS MOVQUAL IMPROV	PHYS CONTROL AGIL/COORD SPACE RECALL/OBSERV RHYTHM FOCUS PERSEV EXPRESS MOVQUAL IMPROV	PHYS CONTROL AGIL/COORD SPACE RECALL/OBSERV RHYTHM FOCUS PERSEV EXPRESS MOVQUAL IMPROV
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TEST VERSION
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TE_____ CLASS_____ SESSION #_____ PANELIST_____

PANELIST #_____ CODE_____

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Key Words and Definitions for Identification of Talent In Music

These concepts are being used to help focus the observer on some of the characteristics, processes and connections which can be recognized in students participating in a music workshop. These are not exclusive definitions. Many of these behaviors overlap and may be functioning simultaneously in the fully involved musician.

The focus of the workshops will change from week to week to allow students to demonstrate their full range of talents and to learn new skills which will help them express their own artistic nature.

SKILLS

1> Rhythm
puts the beat in the body
is able to sustain an even beat
replicates rhythmic patterns accurately
can play repeating patterns
anticipates, waits for proper moment to beat
can find the underlying pulse or beat

2> Perception of Sound
perceives differences in tone and pitch
responds to dynamics
can match pitches
can replicate melodic phrases
is able to sustain independent part

3> Coordination
moves easily through space
able to do two or more things at the same time
can control body in movement and freeze
sustains repeating patterns
works with both hands

MOTIVATION

4> Enthusiasm
responds joyfully
eager to participate
curious, asks questions
is open to unfamiliar styles of music

5> Ability to Focus
directs attention
makes full commitment to the task
is interested and involved in class activities
listens carefully
follows instructions

6> Perseverance
doesn't give up easily
improves over time
takes time to think
is able to take and use corrections

CREATIVITY

7> Expressiveness
responds with sensitivity
performs with energy and intensity
is fully involved
communicates feelings

8> Composition and Improvisation
improvises spontaneously
takes risks
makes surprising or unusual statements
creates sounds in original ways
makes up songs

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Music Identification Instrument

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NAME_____ CLASS_____ SCHOOL_____

WEEK	1	2	3	4	5	6	7
RHYTHM							
PERCEPTION OF SOUND							
COORDINATION							
ENTHUSIASM							
ABILITY TO FOCUS							
PERSEVERANCE							
EXPRESSIVENESS							
COMPOSITION/ORIGINALITY							
SELECTION (1/2/3)							
TOTAL SKILLS							
TOTAL MOTIVATION							
TOTAL CREATIVE							

FIELD TEST VERSION

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MUSIC IDENTIFICATION TALLY SHEET
Talent Beyond Words

RHYTHM	FOCUS	RHYTHM	FOCUS	RHYTHM	FOCUS
SOUND PERCEP	PERSEV	SOUND PERCEP	PERSEV	SOUND PERCEP	PERSEV
COORD	EXPRESS	COORD	EXPRESS	COORD	EXPRESS
ENTHUS	COMP/ORIG	ENTHUS	COMP/ORIG	ENTHUS	COMP/O
RHYTHM	FOCUS	RHYTHM	FOCUS	RHYTHM	FOCUS
SOUND PERCEP	PERSEV	SOUND PERCEP	PERSEV	SOUND PERCEP	PERSEV
COORD	EXPRESS	COORD	EXPRESS	COORD	EXPRESS
ENTHUS	COMP/ORIG	ENTHUS	COMP/ORIG	ENTHUS	COMP/ORIG
RHYTHM	FOCUS	RHYTHM	FOCUS	RHYTHM	FOCUS
SOUND PERCEP	PERSEV	SOUND PERCEP	PERSEV	SOUND PERCEP	PERSEV
COORD	EXPRESS	COORD	EXPRESS	COORD	EXPRESS
ENTHUS	COMP/ORIG	ENTHUS	COMP/ORIG	ENTHUS	COMP/ORIG
RHYTHM	FOCUS	RHYTHM	FOCUS	RHYTHM	FOCUS
SOUND PERCEP	PERSEV	SOUND PERCEP	PERSEV	SOUND PERCEP	PERSEV
COORD	EXPRESS	COORD	EXPRESS	COORD	EXPRESS
ENTHUS	COMP/ORIG	ENTHUS	COMP/ORIG	ENTHUS	COMP/ORIG
RHYTHM	FOCUS	RHYTHM	FOCUS	RHYTHM	FOCUS
SOUND PERCEP	PERSEV	SOUND PERCEP	PERSEV	SOUND PERCEP	PERSEV
COORD	EXPRESS	COORD	EXPRESS	COORD	EXPRESS
ENTHUS	COMP/ORIG	ENTHUS	COMP/ORIG	ENTHUS	COMP/ORIG

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DATE_____ CLASS_____ SESSION #_____ PANELIST_____

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PANELIST #_____ CODE_____

DANCE

Session 1 -	Rhythm	Session 5 -	Spatial Awareness
Session 2 -	Coordination	Session 6 -	Composition
Session 3 -	Combine & Sequence	Session 7 -	Expressive Imagery and Body Language
Session 4 -	Movement Qualities		

MUSIC

Session 1 -	Rhythm	Session 5 -	Coordination
Session 2 -	Perception of Sound	Session 6 -	Composition
Session 3 -	Replication/Repetition	Session 7 -	Combine and Sequence
Session 4 -	Phrasing		

Observation Panel

The panel described earlier observes all seven classes. The fifth panelist may not be involved in the eventual selection of students, but contributes a different point of view during the discussion of students.

Immediately following each class, the panel has a 10-15 minute conversation while the students work quietly or are taken back to the classroom or library by other school personnel. Every child in the class is mentioned in the discussion. The artists, classroom teacher, and outside observer can share points of view, information, and reactions while checking their opinions, building a common vocabulary and coming to a consensus for final selection.

This discussion has been a key part of the process of training classroom teachers to understand the intention and the artistic approaches used in music and dance classes.

Teachers and artistic instructors share information about the children in order to gain greater appreciation of all of the students.

The benefits of this professional collaboration have been noted consistently. Teachers have commented that the chance to observe and discuss their children is a unique and exhilarating experience. Although not every student will be identified as potentially gifted in the art form observed, participation in the activities provides the opportunities for illuminating specific strengths, problems, and learning styles. Over the course of seven weeks, the discussions become more focused and insightful as students are observed in different activities and consensus among panelists is reached.

Use of the Tally Sheet

The separate identification tally sheet is filled out independently by every panelist for each identification class observed. A positive behavior noticed by a panelist is marked as a + next to the criteria. No negative marks are made and positive notices are not erased or crossed out. The marks are tallied by totalling the number of observers who noticed the child in each category. The individual tallies are then transferred to a Student Identification Sheet which contains the marks for all seven weeks.

In addition to the tallies each child is given an overall rating (1=definite selection, 2=possible selection, 3=not selected) at the end of each class. This rating refers to the child's performance in that particular class only and is used in concert with other information to determine the child's ultimate selection for advanced training.

Identification Criteria

The aim of the identification criteria is to help focus the observers on common attributes and behaviors. It provides language for their instinctive observations. When observing a whole class of students it is not possible to give a fair numerical rating for each child on

multiple criteria, so the categories (See Figures 1 and 2) provide a structure for noticing outstanding moments. An overall impression is formed from observing the students actively engaged in the actual activities that will make up the advanced training program.

The ten items on the checklist developed for dance and the eight items for music fall into three categories: skills, motivation, and creativity. In order to encompass as many student behaviors as possible, each of the criteria is defined by four or five behavioral examples. These behaviors are not mutually exclusive. They overlap and are seen in different combinations in each person.

The overall rating allows a summative, personal reaction of the panelist. A child who may be noticed in only one or two categories may be so outstanding in those areas as to warrant selection. For instance, a child who has not yet developed much coordination or rhythmic sense may move with such abandon and improvisational originality as to warrant selection. Simple numerical totals cannot account for this outstanding potential.

Final selection for advanced training relies on both the quantitative ratings and the overall qualitative impression. Taken together they form a prediction that a child's abilities and motivation will allow the talent potential to emerge through further training in the art form.

From: Curriculum Guide for Maximizing Student Potential by Dr. E. Susanne Richert for Kansas State Board of Ed 1992

APPENDIX E

PART II. CURRICULUM DIFFERENTIATION

OUTLINE FOR CURRICULUM DIFFERENTIATION

A. GENERAL PRINCIPLES
1. An Integrated Approach
2. Methods and Teaching Strategies

B. PROCESS SKILLS FOR ALL PROGRAM OPTIONS
1. Introduction
2. Cognitive: Critical and Creative Thinking
3. Independent Learning
4. Communication
5. Affective

C. CONTENT AREA MODIFICATIONS
1. General principles
2. Communication
3. Math
4. Science
5. Social Studies

D. TEACHING REQUIRED SKILLS
E. PRODUCTS AND PROJECTS
F. STUDENT EVALUATION

A. GENERAL PRINCIPLES

1. An Integrated Approach

Cox, *et al.*,(1985), Richert (1985), Tannenbaum (1983),Van Tassel-Baska (1988) and others stress the serious problem of curriculum fragmentation in programs for the gifted. It is essential that districts develop articulation of K-12 high level process skills so that there is continuity and integration in the educational experience of all students. While the process skills may be discussed separately, they are not intended to be taught in isolation. These other kinds of curriculum fragmentation should also be avoided:

- the teaching of process skills, in isolation from content, or content separately from process;
- teaching of either process or content that does not lead to application in a product, performance, or service;
- products with the teacher as the sole audience;
- repetition of skills already mastered.

In a curriculum for maximizing student potential, **process and content should be integrated** to lead to the development of a product or performance by an individual or group of students. The teacher then helps the students find an appropriate audience.

2. Methods and Teaching Strategies

While there is disagreement in the field about some issues, experts in the education of the gifted concur that curriculum for the gifted must be differentiated (Cox, 1985; Gallagher, 1979; Maker, 1986; Tannenbaum, 1983; Kaplan, 1982; Renzulli, 1977; Richert, 1983, 1990, 1993; Van Tassel-Baska, 1988). While curriculum modifications may be accomplished in various ways, there seems to be consensus on differentiation within the following categories:

a. Content, process, and product differentiation,
b. Grouping,
c. Motivation,
d. Learning environment,
e. Student choice; providing variety and flexibility,
f. Organization, responsibility,
g. Resources,
h. Evaluation.

7.1

a. Content, Process and Product Differentiation

In a curriculum for maximizing students potential, the process, content, product and the relationship between these components all require modification.

Each of these areas is addressed directly in sections: A.4, Products; B, Process; and C, Content. For students with gifted potential, process and product are more important than content and skills. The emphasis should not be in learning more information, but in learning different, higher level information which is then applied to some kind of project, process or product.

The process skills that need emphasis are: higher level creative and critical thinking, advanced emotional development and the development of independent thinking, learning and acting. In order to reflect students' diverse interests, the content should become interdisciplinary. Integrating these processes using an interdisciplinary approach will make the content more complex , abstract and interesting.

b. Grouping

The gifted need various kinds of groupings at different stages in their development, including:

- Homogeneous as well as heterogeneous classes;
- Small group, as well as individual activities and projects;
- Older mentors;
- Serving as mentors for younger students;
- Relationships with people from diverse backgrounds and ages;
- Appropriate audiences for their products.

c. Motivation

Student interest should be the major motivational source in order to galvanize the intrinsic motivation, energy and high abilities of the gifted. To do this, students need to be able to make many choices in the content of their assignments and products based on their interests and learning styles.

d. Organization and responsibility

The major change in a student-centered curriculum is the shifting of decision-making responsibility from the teacher to the students. This will change both the learning environment and the level of cognitive and affective outcomes. This does not mean that the teacher abdicates responsibility, but rather acquires a new responsibility: generating appropriate choices so students have experience in making decisions. Only in this way can students use their intrinsic motivation to become responsible and independent learners.

Classroom management of individual and small group work, in various forms and for diverse purposes, will develop students' abilities to negotiate, cooperate, collaborate and meet their commitments to each other.

e. Learning Environment and Community

The following environmental elements are prerequisites for healthy, authentic, non-manipulative and psychologically safe relationships between teachers and students, and among teachers and students:

- A non-judgmental, accepting atmosphere which fosters open-mindedness and encourages the

expression and critiquing of diverse views. This is essential for the development of critical thinking skills and healthy self-acceptance.

- **Evaluation criteria that include originality, divergence and difficulty.** These are crucial for creativity and risk-taking.
- **Acceptance and respect of differences and limitations** and stress on cooperation as opposed to competition. This is required to nurture healthy self-concepts and relationships.
- **Opportunities for decision-making** about assignments, planning and evaluating their own work. This will develop both critical thinking and autonomous learning
- **Responsibility for self-discipline and commitments to others.** Students should be involved in developing class rules, criteria for evaluation, plans, and taking responsibility to and for each other for meeting their commitments to others and to the class rules.

f. Student Choice: Variety and Flexibility in Content

A crucial responsibility of a teacher who wants to maximize students' potential is the offering of variety and flexibility in content in order to evoke intrinsic motivation. This is the key to developing maximum cognitive and affective potential.

This is done by generating choices related to students' interests in the following aspects of curriculum:

- in the content of assignments and products;
- in the media to be used for products;
- in the length of time devoted to an investigation, project or products so that students are not deterred from attempting more ambitious work;
- in grouping (individual, mentor, small or large group);
- in resources selected for completing projects or products;
- in the basic or research skills to be applied;
- in the criteria for evaluation;
- in the methods of evaluation to be used.

g. Resources

1) Human resources

Students' feelings of competency and self-sufficiency should be encouraged by requiring them to perceive themselves as their first learning resource. After this, students should turn to their peers for assistance before they go to teachers or other adults. They must also have access to human resources and specialists in the community.

2) Material Resources

All students need to use resources beyond the classroom. This includes access to higher level libraries, laboratories, computer data bases and information from other media including audio and video cassettes.

h. Evaluation Procedures

All students need to learn to evaluate their projects and their individual progress, rather than relying only on the judgment of teachers and other adults. Section II.F., below offers more specifics on students' evaluation. In brief, evaluation criteria should focus on:

- individual progress, rather than

comparative judgments;
- originality, rather than conformity to teacher expectations;
- the learning process, including initiative, rather than just tests;
- the learning outcome or product, rather than just test scores.

B. PROCESS SKILLS FOR ALL PROGRAM OPTIONS

1) Process Skills

The process skills for maximizing potential should include those on the highest levels of various cognitive and affective taxonomies (Bloom, 1956; Guilford, 1967; Kohlberg, 1983; Krathwohl, 1984; Maslow, 1970; Richert, 1991). These advanced objectives may be grouped in the following way:

1. Cognitive
- critical thinking skills: analysis evaluation.
- creative thinking skills: fluency, flexibility and synthesis.

2. Independent Learning
- decision making
- problem solving
- research and planning.

3. Communication Skills
- verbal and non-verbal
- use of computers and other technology and media.

4. Affective Skills
- intrinsic motivation
- self-esteem independent of others' approval
- respect for others
- positive, responsible personal relationships
- altruism.

These process skills should not be taught in isolation. Advanced objectives should be integrated into content areas, teaching and learning strategies, products, evaluation criteria and procedures. To assist teachers in applying process skills to the curriculum, the charts on the following pages illustrate each of the process areas.

The Products and Projects section has charts for each of the process areas. This following part designates strategies and products for each area.

2) Student Products and Projects

Students should be allowed to have a range of choices in doing products and projects. This provides motivation and allows them to explore a wide range of media; so that ultimately they can find their best medium of expression. To encourage such exploration, teachers should suggest and offer examples of media for products in each of the following categories:

- verbal: written and oral,
- non-verbal, i.e.., visual, kinesthetic,
- multi-media: audio and video cassettes, computers, painting, dance, mime, etc.,
- interdisciplinary as well as those specific to each discipline.

The four following pages are charts for each of the process areas. They designate strategies and products specific to areas that are appropriate for students with gifted potential. They will assist teachers in applying the process skills and strategies to the curriculum.

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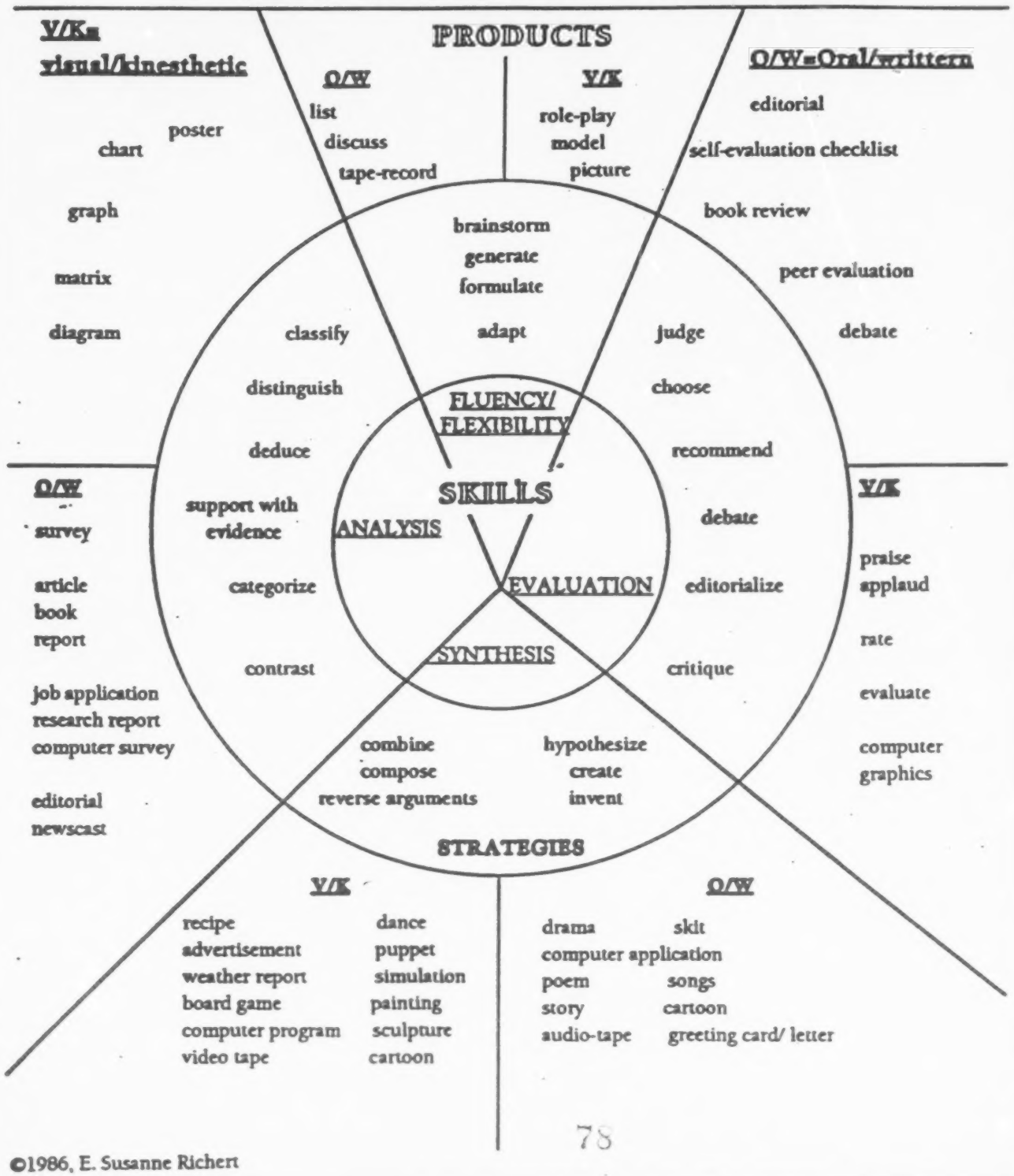
1. CRITICAL/CREATIVE THINKING



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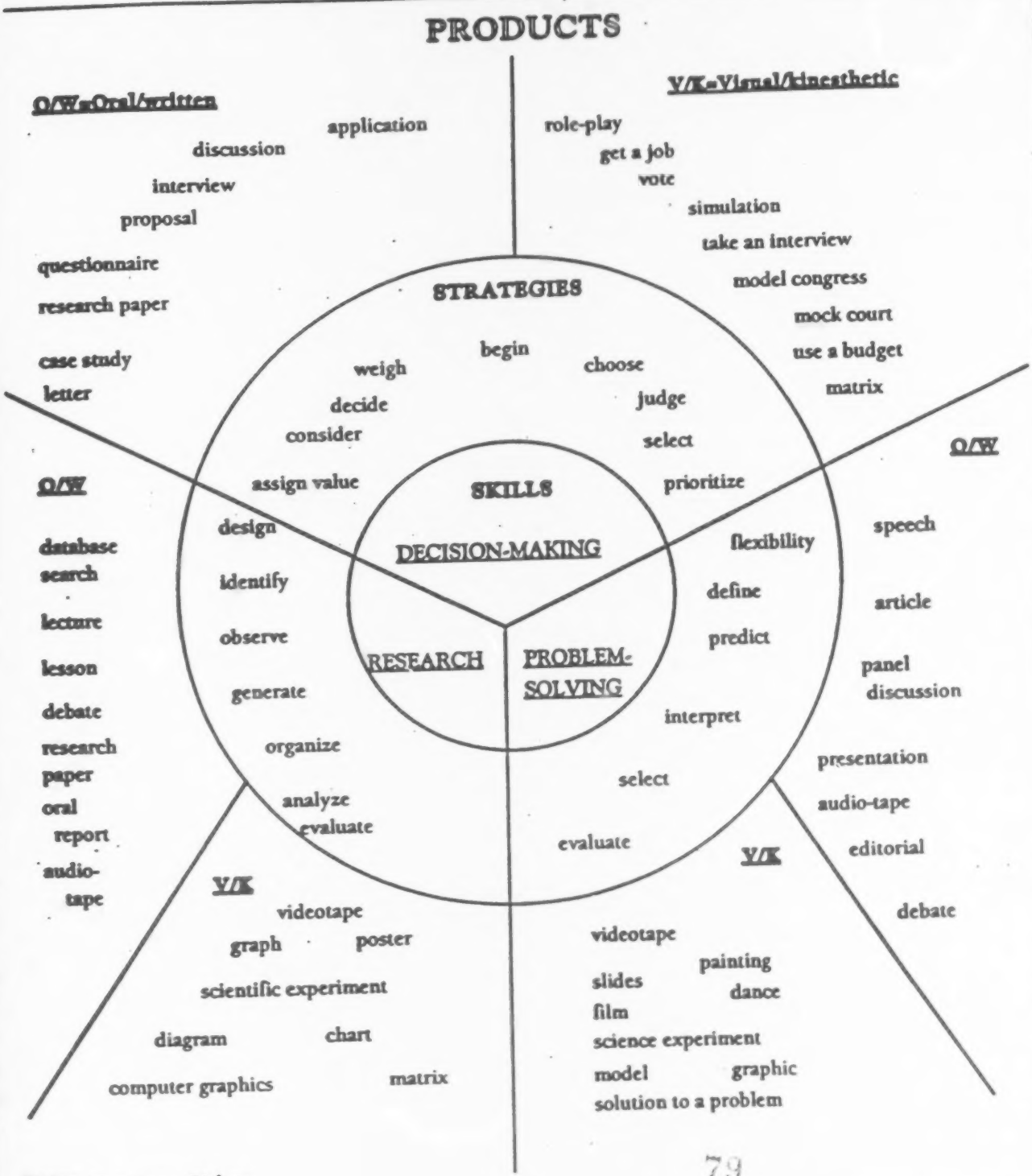
2. INDEPENDENT LEARNING



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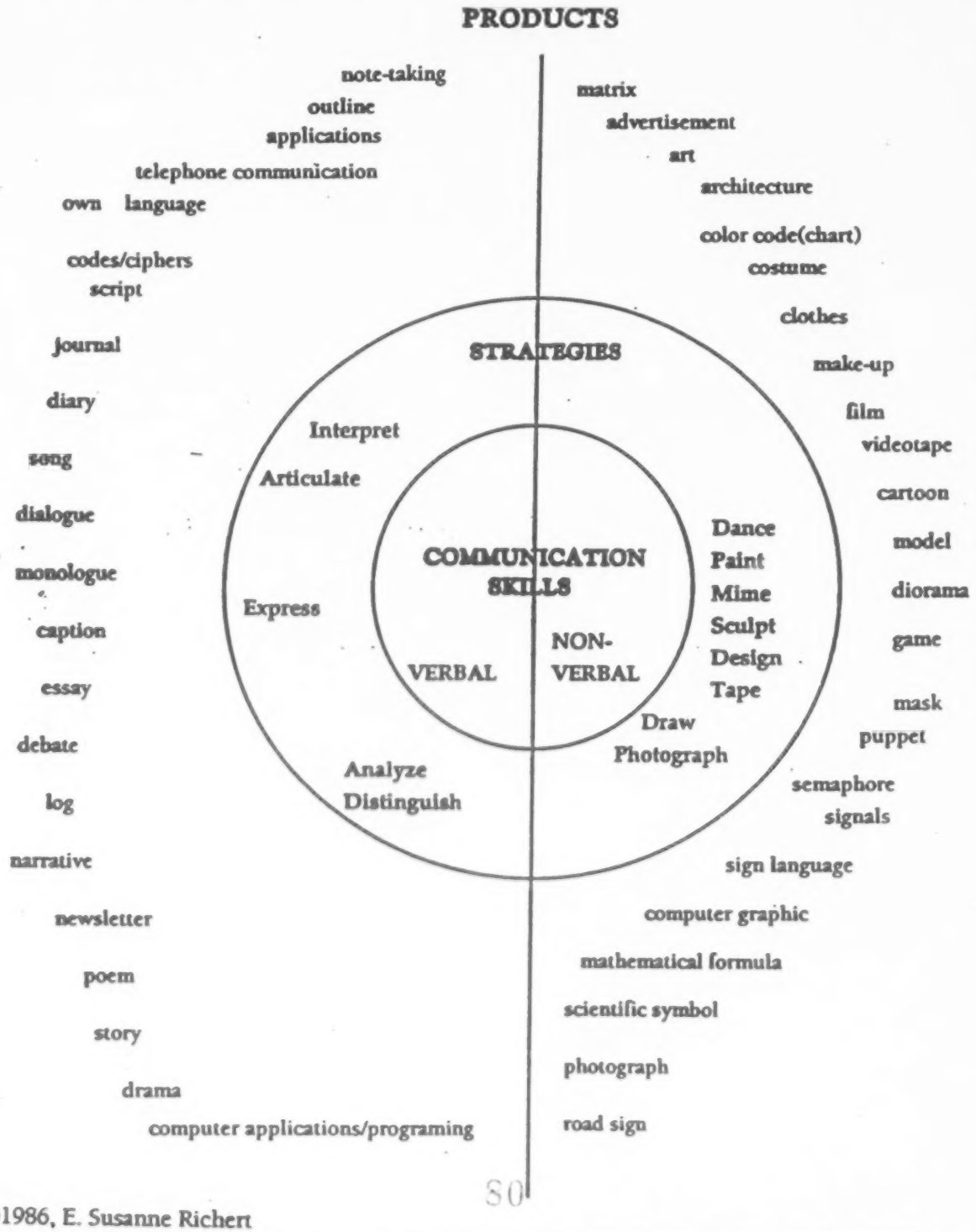
3. COMMUNICATION



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4. AFFECTIVE SKILLS

GOALS: self-esteem,
self-acceptance
intrinsic motivation

GOALS: positive,
responsible
nonjudgmental
personal relationships

PERFORMANCE/ STRATEGIES

interview

autobiography

role model
mentorship
journal
diary

plan
goal-setting

decisions

offering
choices

self-evaluation
counseling

stress management techniques

acceptance of feedback

exercise
nutrition

peer teaching
team play

internships

role-model

cooperation
friendship

small group:
-discussion
-plan projects

research

letter

telephone

employment
mentor

leadership role
volunteer activities
constructive feedback

humor

service

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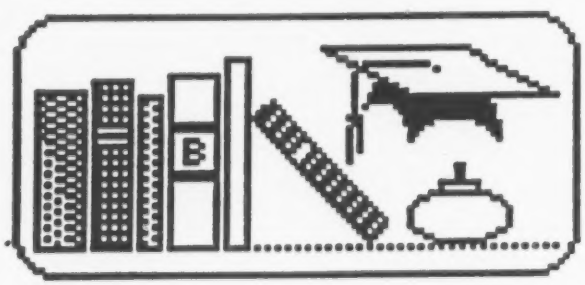
The charts suggest many appropriate products and projects, including the following:

- the type of **medium:**
  auditory/oral,
  written,
  spatial/visual,
  kinesthetic;

- the **process** skills applied:
  critical or creative thinking,
  independent learning,
  communication,
  affective;

- the **content** areas addressed:
  interdisciplinary,
  communication/language arts, math, and science



C. CONTENT AREA MODIFICATIONS

1. GENERAL PRINCIPLES

In programs focusing on specific subject areas, content needs to be differentiated for students with gifted potential. Recommendations for the content areas of Communication/language arts, math, science and social studies are specified in sections 2,3,4 and 5, below. The following four areas of content modification are applicable to all subjects and program options:

a. Higher level process skills
b. Subject/knowledge, interest-based content modification;
c. Acceleration of level or rate of learning;
d. Both discrete disciplines and interdisciplinary approaches

a. Higher level process skills

In every subject, the four areas of higher level process skills must be integrated into the curriculum content. These include cognitive and affective process skills, communication and independent learning.

b. Subject/knowledge

Because research clearly indicates that the distinct abilities of the gifted are evoked by what interests them, content needs to be made interest-based.

This can be accomplished by developing units in response to student interests (using interest inventories or informally surveying the students) or by expanding the subject and making it interdisciplinary. This allows students' interests to be connected to content.

c. Level or rate of learning

Acceleration is always appropriate for the gifted. That doesn't mean simply offering them the following year's curriculum or doing this year's work more quickly. Acceleration should be individualized. Within each program option, each student should be offered a choice of materials at their highest mastered reading level and be allowed to progress at the best pace he or she can manage.

Achievement test results are useful in helping students select materials at an appropriate level and in excusing them from skills they've already mastered. This allows them to go on to higher level work.

e objective here is not to have students do re work faster, but rather to give them time to ceed to more complex areas, analyses or ducts.

Standardized tests, teacher made tests or ssroom performance can also be used as icators for placing a student in a higher grade el for a particular subject, or even for skipping grade level altogether. This will help save dents' time in the basic skills. Students with ed potential will need other program options develop higher level abilities, however.

It is important to remember that in a formal celerated option area such as math (or in an vanced placement course) offering higher ntent by itself is not sufficient. The higher el process skills described previously also ed to be integrated into the content area.

Both discrete disciplines and terdisciplinary approaches

Within each discipline, it is crucial that dents acquire knowledge of fundamental ncepts and different methods of evaluating oducts and projects. An interdisciplinary proach to curriculum units in each subject ea is essential. Cross-disciplinary subjects ow for more complex analyses and products d for integration of students' interests into the rriculum.

Furthermore, in our historical era, every bject area is becoming more interdisciplinary; l knowledge is becoming interrelated. If dents with gifted potential are someday to ake original contributions to a field, they must able to integrate knowledge from a range of lds and be able to relate their contribution to rious fields.

e. Homogeneous grouping

Homogeneous grouping is recommended when based upon appropriate and equitable criteria. Students should demonstrate some, though not necessarily all, of the following characteristics:

- self-direction and self initiation (as .... demonstrated by products or projects produced outside the school, or by responsibility taken at home or at jobs);
- creativity (as demonstrated in behavior, products or creativity tests);
- student choice (which may be assessed through an interview, or in using an interview protocol similar to that included in the identification section dealing with program design and policies).
- exceptionally high achievement in one or more academic areas.

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2. COMMUNICATION: LANGUAGE ARTS, READING, ENGLISH and COMPUTERS

a. INTRODUCTION

Language arts is directly addressed in the communication section of Process Skills. In a program option that focuses on language arts or English, the following skills should be emphasized - though not to the exclusion of the other process skills.

Use a holistic approach when teaching language arts skills. Language skills are inherent in every discipline and provide educators with an avenue to address the cognitive and affective needs of students. As society progresses into the Information Age, language skills will enable students to function effectively through computer networks and documents produced with word processing programs. Mastering language arts skills will ensure achievement.

b. ADMINISTRATIVE CONSIDERATIONS AND POLICIES

Each of the following policies (elaborated in Part I.E.) should be included in program design. They are all appropriate for language arts/ Communication or English program options and other content areas:

1) minimum monthly time in program
2) budget;
3) homogeneous grouping;
4) not penalizing students in pull-out programs;
   gifted program work should replace, not add to regular classroom work;
5) acceleration options:
   - students should be pretested in skills and excused from mastered skills to go on to higher level cognitive activities;
   - continuous progress in a basic skill, but maintained at the current grade level;
   - continuous progress in a basic skill, but moving to a higher grade level;
   - curriculum compacting or straight linear acceleration (the same work but at a faster pace);
   - simultaneous enrollment in courses at different grade levels, including post-secondary;
6) credit;
7) record keeping for attendance;
8) evaluation and grading;
9) access to resources.

There are additional policy recommendations that are essential to implementation of effective language arts/Communication or English program options for the gifted. These include:

1) **Budget**
In language arts, the budget should provide and allow for the purchase of paperback books, magazines and other supplementary materials to textbooks.

2) **Access to resources**
Students should have easy and unlimited access to libraries, media, computer centers and their resources.

3) **Skills in content areas**
Students should be encouraged to utilize language skills among and within the various disciplines.

4) **Foreign language**
Foreign languages should be offered earlier than the secondary level. Students with gifted potential should be encouraged to learn a second language.

5) **Release from and credit for previously mastered material.**
When students can demonstrate competency through a test score, a product, or a grade from a course completed elsewhere (especially at a higher level) they should be released from previously mastered material. They should get credit, where applicable, especially on the secondary level.

c. REQUIRED SKILLS: SCOPE AND SEQUENCE

The scope of the language arts curriculum is unlimited. It involves development of different products with diverse purposes for a variety of audiences (see the chart on the next page). The sequence of skills does not necessarily follow a linear sequence. Students with gifted potential usually master skills out of sequence with district curriculum guides. Therefore, students with gifted potential should be allowed to move ahead as rapidly as they can and be excused from skills they have mastered.

d. CURRICULUM MODIFICATIONS

1) General Modifications

In teaching the component parts of language (reading, writing, speaking, non-verbal expression and research skills) to students with gifted potential, the general principles of content modification in Part II., B.1. should be applied. The following items should be integrated into the curriculum:

- Higher level process skills;
- Interest-based content and knowledge;
- Acceleration of level or rate of learning
- Both discrete disciplines and interdisciplinary approaches.

2) Spelling and vocabulary

These skills are best taught in context as integral parts of material read and written by the student, rather than as isolated lists from texts.

3) Writing as a process

A national study analyzing the methods of over 70 different writing projects demonstrated that writing is a student-centered process that involves emotional as well as cognitive development (Hillocks, 1983).

Lessons on writing should facilitate the following sequence of research-based steps: motivation, pre-writing, generating the first draft, revising/editing, including peer editing and evaluation.

Therefore, when teaching writing skills, teachers should emphasize the following:

- Motivation should be based on student interests.
- Students should write and produce a variety of writing products, with diverse purposes, for different audiences, as illustrated in the chart at the end of this section. Remember: students should choose what type of products to produce.
- Emphasis should be placed on creative and critical content.
- Students should strive for clarity in writing.
- Proper use of mechanics is an outgrowth of the writing process. It is best done in the editing stage of the writing process.
- Peer editing is an effective technique for learning to edit.
- Evaluation of products is best accomplished with specific, limited, pre-established criteria.
- Assessment should be done by the author, peers, the teacher and others.

4) Reading

- Encourage students to read for pleasure. Give them choices in selecting reading materials. Students must be offered a choice of responses to reading, based on learning styles and interests.
- Literary selections must represent a variety of genre. They must reflect the abilities, interests and needs of students with gifted potential.
- Involve students in the analysis, evaluation and interpretation of materials.
- Students should read for information and be able to evaluate the usefulness and appropriateness of materials.
- Focus on literary criticism as it relates to different genres, particularly in secondary classes.

5) Research skills

- Research skills are crucial for the development of intellectual independence.
- Research skills should be taught in the context of student needs. These skills should be taught while students are working on a research project and as their need for a specific skill arises. Direct instruction is necessary only if they have demonstrated that they have not yet mastered the skill.
- Students should incorporate specialized and varied retrieval systems (primary and secondary sources, computer data-bases) in their investigative procedures.
- The result of research is a creative product. It is evaluated according to pre-established, student and teacher set criteria.

e. TEACHING STRATEGIES

Each of the recommendations in Part II.A, **Methods and Teaching Strategies for Maximizing Potential**, apply:

- Content/process/product differentiation
- Grouping
- Motivation
- Learning environment and atmosphere
- Student choice; providing variety and flexibility
- Organization and responsibility
- Resources
- Evaluation

Teachers should take the following five steps when teaching all students in language arts:

- Assess learning styles and provide for differences.
- Establish a safe physical and psychological learning environment.
- Provide multiple sources of information and materials.
- Use a variety of instructional techniques (Student centered activities should be the focus of the classroom).

1) Student-centered activities may include:

Laboratory
Research Projects
Games
Manipulatives
Independent study
Individualized pacing
Decision-making
Leadership experiences
Affective experiences
Multi-media use
Mentorships/internships
Role-playing/Simulations
Interviews/Surveys
Debates
Word-processing

2) Teacher-centered activities may include:

Discussions
Demonstrations
Tutoring
Questioning
Lectures

3) Grouping opportunities for:

Individual and small group activities
Having a mentor and being a mentor to younger students

f. EVALUATION

All aspects of evaluation (the evaluator, what is to be evaluated, the criteria, and the procedures for evaluation) apply in the study of Communication or English and language arts and other content areas for students with gifted potential. In addition, the following criteria have special emphasis in a course (or unit) focusing on language:

- **Creativity:** originality, elaboration, flexibility and fluency;
- **Appropriate level** of material;
- **Critical thinking**
  clarity of expression
  clarity of analysis
  appropriateness of evaluation
  appropriateness of form and style to the medium of expression and for the intended audience;
- **Professional standards**—as they apply to student products. The various media and products students with gifted potential produce (research paper, poem,

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play, computer program, letter of application, etc. (see product list above for language arts) each require different criteria for evaluation.

Students should be taught to use different evaluation criteria depending upon media, product, purpose and audience. See Section E. for further discussion on evaluation.

5) Individual progress

It is useful to get baseline (or "pre-assessment") data on students in the beginning of the year by evaluating writing samples or other products. These may be compared to a "post-assessment" of a similar sample at the end of the year to derive a measure of student progress.

OUTLINE OF LANGUAGE ARTS PRODUCTS, SKILLS, AND AUDIENCES

MULTIPLE SKILLS	DIFFERENT PURPOSES	VARIOUS FORMS	DIVERSE AUDIENCES
• COGNITIVE	Record experiences Express ideas or opinions Ask questions, get information Catalogue information/ideas Organize tasks Analyze information Report/record information Demonstrate knowledge Teach others Edit own work Edit others' work Computer Literacy	Cluster outlines Sequential outlines Essays Essay tests Research projects Expository writing Dictionaries Checklists Business letters Computer programs Plan activities/work Minutes of meetings Speeches Announcements Editorials Directions News stories Interviewing	Teachers Acquaintances Experts Information Sources Employers
• CREATIVE THINKING	Creative problem solving	Titles for art Cartoons Poetry Satires/fables/myths Narratives Descriptions Plays Graphics "Occasional" cards Radio or TV announcements Advertisements TV scripts or screenplays Cassette recordings (audio/visual) Biographies Autobiographies "Book"	Editors Publishers
• AFFECTIVE • SELF-UNDERSTANDING • EMOTIONAL • INTERPERSONAL	Understanding others Expresses feelings Record experiences Solve personal problems Reinforce relationships Help others Make personal decisions	Greeting cards Personal letter Postcard Invitations "Thank you" notes	Self Peers Parents
• REQUIRED-SURVIVAL SKILLS	Identify own work Follow test directions Complete required forms (school, government, employment) Express complaints Influence others	Name on all work Address Test answers School forms Information forms Application forms Order forms Business letters Bank checks IRS forms	Government business school officials Groups Others

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3. MATHEMATICS

a. INTRODUCTION

Textbooks used in teaching mathematics should follow the recommendations of the standards promoted by the National Council of Teachers of Mathematics. A gifted mathematics program should incorporate necessary skills in the numerical domain, while fostering the use of higher level thinking skills. Students must be presented with a rich variety of experiences to interact with numbers and their operations as they relate to cognitive and affective domains. In addition to basic math instruction, the curriculum should be directed toward an enriching, non-textbook, student initiated type of program. Research on female achievement in mathematics stresses the importance of avoiding sex role stereotyping.

A math program for students with gifted potential should offer qualitative and quantitative study, with emphasis on the former. The focus should be on *different* rather than more or faster work.

b. POLICIES

In order to serve students with gifted potential most effectively, it is important to incorporate specific policies to their benefit. This is especially important considering the multiple program arrangements possible: heterogeneous, self-contained, pull-out, cluster, advanced placement and accelerated classes. Each of the following policies, which is elaborated in Part I.E., is appropriate to mathematics program options and other content areas for students with gifted potential. These policies should be a part of the program design:

1) minimum monthly time in program;
2) budget;
3) homogeneous grouping;
4) not penalizing students in pull-out programs; gifted program work should *replace, not add to regular classroom work*;
5) acceleration options:
   - students should be pretested in skills and excused from mastered skills to go on to higher level cognitive activities;
   - continuous progress in a basic skill, but maintained at the current grade level;
   - continuous progress in a basic skill, but moving to a higher grade level;
   - curriculum compacting or straight linear acceleration (the same work but at a faster pace);
   - simultaneous enrollment in courses at different grade levels, including post-secondary;
6) credit;
7) record keeping for attendance;
8) evaluation and grading;
9) access to resources.

In addition, there are specific policy recommendations essential to implementation of an effective mathematics program for students with gifted potential:

1) **Adequate funding** is essential for the required program flexibility. This funding should include, but not be limited to, calculators, abacus, pattern blocks, tangrams, cuisenaire rods and computer hardware and software. Teacher materials should be provided for non-text, student oriented activities.

2) **Pretesting** is essential to provide for the most effective use of time. It is essential to allow students to test out of mastered material.

3) **Simultaneous enrollment** in courses at different grade levels, including post-secondary.

4) **Evaluation and grading must not penalize students** for attempting more difficult work.

5) **Assignments** required as part of a regularly scheduled gifted program *should replace, not add to*, a student's regular classroom workload.

6) **Early exit** from math courses should be allowed.

7) **Internships, mentorships, apprenticeships and cross-age** activities should be included in district policy.

c. CURRICULUM MODIFICATION IN MATH

1) Approach: flexibility and complexity

In a curriculum for maximizing student potential, mathematics should be designed as a framework for individual learning alternatives. It should be flexible enough to meet the needs of all students.

In order to appropriately teach math to students with gifted potential, teachers must use content that is more complex, abstract, organized with more divergent activities and related to more concrete applications than the regular mathematics curriculum.

2) Basic mathematics concepts and sequence include:

a. Basic skills as the foundation of all mathematics.
b. An understanding of number systems, sequencing, patterns and theorems.
c. Vocabulary - A clear understanding of definition, pronunciation and use of mathematical terms.
d. Research - Understanding the historical development of mathematics and its dependence on then available technology.
e. Accelerated scope and sequence for students with gifted potential.

3) Content and process differentiation

In teaching math to students with gifted potential, the general principles of content modification listed in Part II, B.1., apply:

a. Higher level process skills;
b. Interest-based content, knowledge;
c. Acceleration of level or rate of learning;
d. Both discrete disciplines and inter-disciplinary approaches.

All the process skills listed in this guide are considered essential to math content for the gifted. However, not all students progress at the same rate. Some students may need more emphasis on basic math skills while others will progress rapidly.

Manipulatives are highly recommended because they benefit all students. Students with gifted potential can experience inductive and deductive reasoning much more quickly with these devices. They will also have greater math retention with their use.

4) Application of mathematics skills will include:

1) An understanding of binary operations, number theory and models;
2) Problem solving that is challenging, enriching and includes non-text and non-routine activities;
3) Estimating answers and evaluating the reasonableness of answers.

5) Strategies for teaching mathematics

a. General Approach

Each of the recommendations in Part II.A, Methods and Teaching Strategies, apply:

a) Content / Process / Product Differentiation;
b) Grouping;
c) Motivation;
d) Learning Environment and Atmosphere;
e) Student Choice, providing variety and flexibility;
f) Organization, Responsibility;
g) Resources;
h) Evaluation.

b. Content and skill modifications

In addition to regular mathematics content, students with gifted potential need additional learning experiences that consider:

- Emphasis on real life applications of mathematical principles;
- The aesthetic aspects of nature and the visual and performing arts as they apply to mathematics;
- Understanding the implications of mathematics in ethics which includes statistics (graphs and polls), space technology and the future impact of advances in mathematics;
- The use of tools in mathematics, including: calculators, abacuses, cuisenaire rods, pattern blocks, computer literacy, spread sheet programs, computer ethics, computer modelling, simulations and problem-solving.

c. Learning environment

The learning environment should be one which is student-centered. Students should feel that risk-taking and reasoned views are valued in classrooms and that the teacher's response will be non-judgmental. This atmosphere needs to be rich in hands-on applications and printed materials for students' intellectual stimulation.

d. Organization and responsibilities

The math program should be organized to produce learners who can be independent problem-solvers; capable of applying solutions in a real world context. Task commitment and self-direction characterize giftedness in mathematics and other content areas.

Individualization and self-initiated study are essential to these students. Strategies should be developed to offer students options based on personal style and individual capability.

Teacher and student responsibilities for organization in the classroom may be distinguished in the following way:

- **Teacher responsibilities:**
  a) Offer choices, facilitate and guide in the selection and variety of materials and learning in order to promote intrinsic motivation
  b) Provide teaching and instruction in needed skills for problem-solving,
  c) Teach students to evaluate products and progress,
  d) Provide a safe atmosphere which fosters risk-taking, hypothesizing, collaboration and responsibility.
- **Student responsibilities**
  a) Identify areas of personal interest
  b) Acquire skills necessary for problem solving
     - identify problem
     - develop a plan for a solution(s)
     - implement the plan
     - evaluate the solution(s)
     - develop a product(s)
     - evaluate product(s)
     - develop skills in self-evaluation which include: process, individual progress and product evaluations.

e. Student products

Student-made products should be developed in a mathematics curriculum. Products produced in mathematics may include:

a) one dimensional products, i.e. lines, written formulas,
b) two dimensional products (spatial/visual) i.e. graphs, spreadsheets, etc.
c) three dimensional products, i.e. models, games, (kinesthetic).

Students should be offered choices of creating products in one or more of these areas. These products make the concepts of application, transfer and creativity useful, applicable and realistic experiences. The chart on the following page suggests a variety of products appropriate for mathematics.

f. Evaluation in Mathematics

In the study of mathematics, as well as the other content areas, all modifications for evaluation apply. This includes the criteria and the procedures for evaluation and what is to be evaluated. See section II.F., Student Evaluation, below. In addition, the following three evaluation criteria should be present in a course or unit focusing on math:

1) Process evaluation

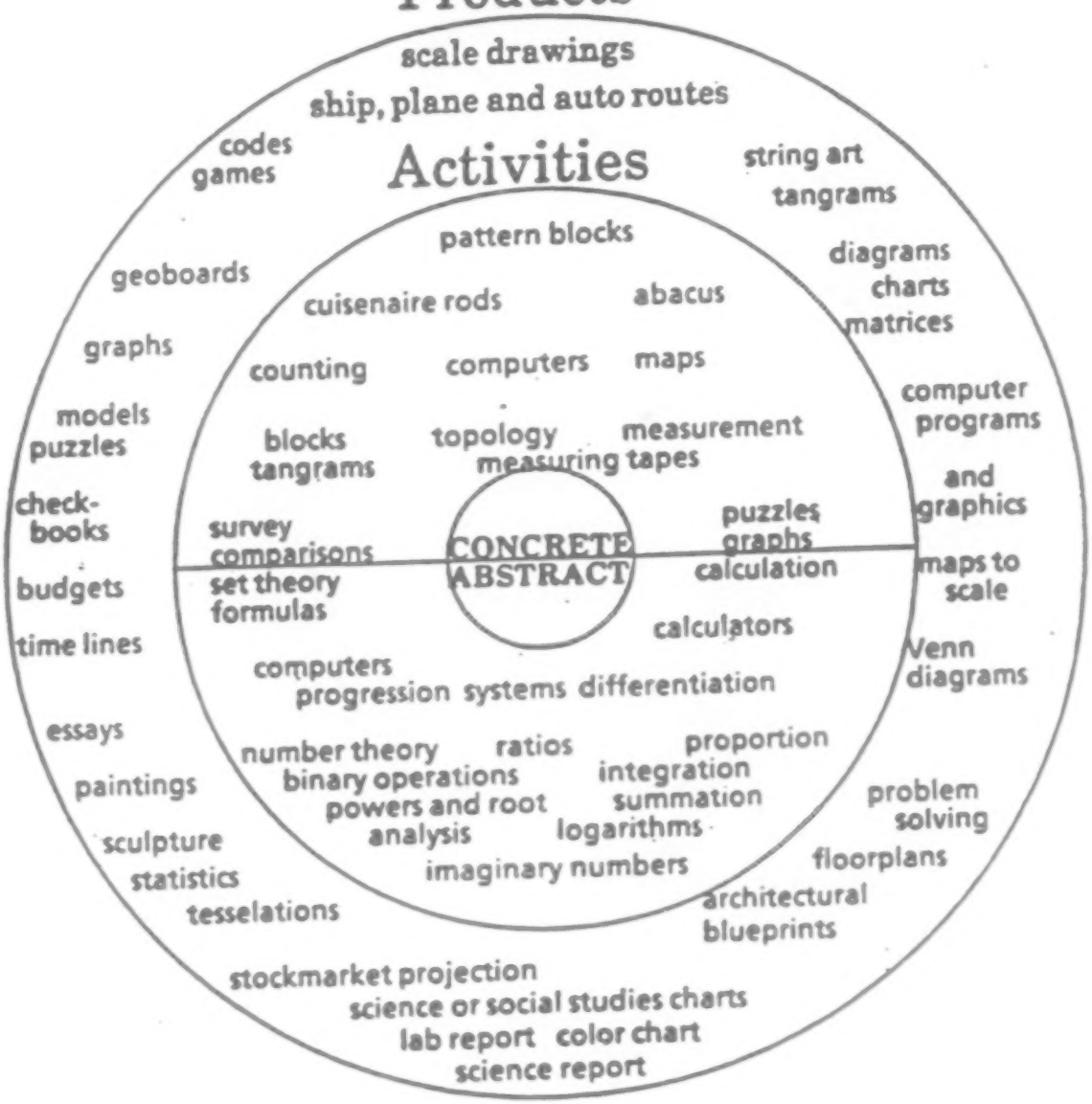
Risk-taking, the willingness to be wrong and the capacity to analyze a problem or project that did <u>not</u> succeed are all appropriate evaluation criteria in math for students with gifted potential.

The capacity to perceive applications of mathematics in other disciplines is essential to the development of a mathematician and is therefore a useful criterion.

2) Product evaluation

The criteria students should strive for are the same as those used in the profession, which will vary according to the application, product and medium of expression chosen by the students (it could be anything from art and music to architecture and science).

MATHEMATICS
Products and Strategies



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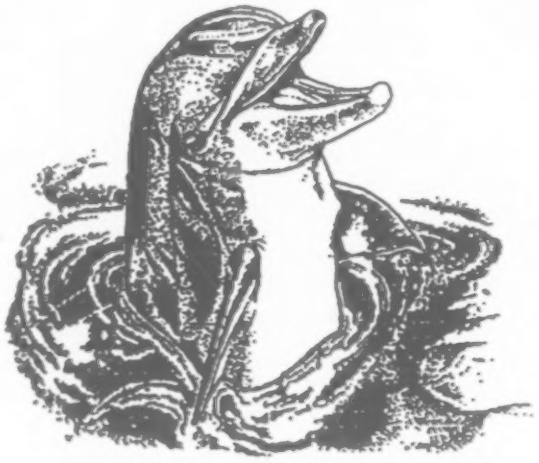

4. SCIENCE

a. Introduction to science for students with gifted potential.

Productive science education should produce scientists and informed world citizens who are prepared to deal responsibly with social issues related to the applications of science and technology. Instead of just learning about process skills, which in science are scientific methodology, students need to learn and use those skills to achieve a result, i.e. "real life" research without predetermined outcomes. In science, the avoidance of sex role stereotyping is vital if females are to develop their full potential.

In addition to learning concepts, students need to use their knowledge of concepts to extend their understanding at the analysis, synthesis, evaluation and ethical levels. The basic concepts students should understand include:

1) The nature of scientific inquiry;
2) The limitations of science and the scientific method;
3) The interconnectedness of elements of the physical world;
4) The scientific basis of societal and global problems;
5) The historical development of scientific concepts and their dependence on the technology of the time;
6) Our interdependence with all species in nature, and the importance of the global ecosystem.
7) The rapid rate of change of scientific information and the flexible nature of the discipline;
8) Ethical consequences to the use of research and new technologies.

b. Policies for Science

Students with gifted potential require time and resources beyond those generally provided by a regular school program. Each of the following policies, which are elaborated in Part I.E., are appropriate for science program options and other content areas. They should be part of program design:

1) Minimum time spent in the program,
2) Budget,
3) Homogeneous grouping,
4) Not penalizing students in pull-out programs,
5) Acceleration possibilities, such as:

- students should be pretested in skills and excused to go on to higher level cognitive activities;
- continuous progress in a basic skill, but maintained at the same grade level;
- continuous progress in a basic skill, but going to a higher grade level for that subject;
- curriculum compacting or linear acceleration (the same work but at a faster pace);

- simultaneous enrollment in courses at different grade levels, including post-secondary.

6) Credit,
7) Record keeping for attendance,
8) Evaluation and grading that does not penalize students for attempting more difficult work,
9) Access to resources.

Additional policy recommendations that should be stressed in the implementation of an effective science program option are:

1) **Materials**
Laboratory equipment and materials must be provided at all levels, K-12. Scientific periodicals should be made available.

2) **Testing**
Pretesting on content and process skills should be administered. Students should be able to test out of mastered materials and use their time in the most effective manner possible.

3) **Simultaneous enrollment** in courses at different grade levels, including post-secondary, should be encouraged.

4) **Assignments** required as part of a regularly scheduled gifted program **should replace, not add to,** a student's regular classroom workload.

5) **Evaluation and grading must not penalize students** for attempting more difficult work.

c. Required Skills and Sequence in Science

There are certain basic process skills, dealing with the scientific method, that are common to all grade levels of science instruction. These skills are integrated into science courses as suggested by the chart on the following page. They are practiced repeatedly, with a greater level of sophistication and elaboration than in the regular classroom. Some of the most important skills include the following:

1) Observing/communicating,
2) Classifying,
3) Inferring,
4) Predicting,
5) Measuring,
6) Interpreting data,
7) Making operational definitions,
8) Formulating questions and hypotheses,
9) Experimenting,
10) Formulating models.

d. Curriculum Modifications in Science

While taking into consideration the individual interests, abilities and learning styles of students with gifted potential, certain content modifications are appropriate for all students. In teaching science for **Maximizing Students' Potential**, the general principles of content modification in Part II.A, should be applied:

- Higher level process skills,
- Interest-based content and knowledge,
- Acceleration of level or rate of learning,
- Both discrete disciplines and interdisciplinary approaches.

These science content and process skills should be offered at an accelerated, more complex and higher level of thinking than for regular classroom students.

Emphasis should be placed on the following approaches:

- Inquiry,
- Independent studies,
- Laboratory experiences,
- Open-ended exercises,
- Presentations before professional audiences,
- Mentorships.

e. Instructional Strategies in Science

1) Introduction

Each of the following recommendations, in Part II.A, Methods and Teaching Strategies, apply:

- content/process/product differentiation;
- grouping;
- motivation;
- learning environment, atmosphere;
- student choice; providing variety and flexibility;
- organization and responsibility;
- resources;
- evaluation.

2) Intrinsic Motivation and Self Awareness

Curriculum should help students to understand themselves and gain awareness of their strengths and limitations. The following areas and goals are critical in structuring a positive learning environment:

- Interest: define, develop and expand areas of personal interest in order to expand intrinsic motivation.
- Learning styles: provide a variety of materials and methods suitable to different or preferred approaches.
- Capabilities: recognize and accept abilities and limitations.
- Responsibility: provide students with choices so they may develop their decision-making skills and an understanding of the consequences of choices.

f. Curriculum Organization and Responsibilities

Curriculum should be organized to develop multiple options. In this way, students may develop into intrinsically motivated independent learners. Strategies should be developed to offer students choices and variety. The following strategies are appropriate:

1) Flexibility

a) The classroom must provide an atmosphere that fosters creativity, critical thinking and problem solving skills. The role of the teacher becomes chiefly the provider of variety and choices in the following areas:

- content;
- time;
- grouping;
- resources;
- cognitive skills.

b) The student-centered and teacher-centered activities listed below will create the most effective learning environment:

Student Centered Activities

laboratory;
learning activities packet;
research projects;
games;
manipulatives;
independent study;
instructional modules;
model building;
simulation;
observation.

Teacher Centered Activities
lecture;
demonstration;
discussion;
tutoring;
recitation;
questioning.

2) Teacher Responsibilities include: acting as facilitator, rather than director of instruction. Teachers should accomplish the following:

- guide students in selecting from a variety of materials and resources;
- provide a learning environment that allows risk-taking so that students may become independent learners;
- provide a variety of small group activities and experiences that allows for peer learning;
- provide direct instruction only in needed skills;
- help students to evaluate their progress.

3) Student Responsibilities include:
a) identifying areas of personal interest and need;
b) acquiring skills necessary for scientific inquiry, including:

- decision-making;
- planning;
- implementing;
- task commitment;
- evaluation;
- risk-taking;
- critical thinking;
- problem-solving;
- curiosity;
- responsibility.

g. Evaluation of Students in Science

All of the aspects of evaluation described in Part II, E., (the evaluator, what is to be evaluated, the criteria and the procedures for evaluation) apply in the study of science and other content areas for the gifted. In addition, the following evaluation criteria should be used in a course or unit focusing on science:

1) Process and individual progress evaluation

- Risk-taking (the willingness to be wrong) and the capacity to analyze an experiment or project that did not succeed are appropriate affective goals and evaluation criteria in science).
- The capacity to generate testable hypotheses (even if they don't work) is essential to the development of a professional scientist's creative thinking and is therefore a useful process evaluation criterion.
- The ability to analyze the social and ethical consequences of discoveries or new technologies is a major responsibility of scientists. Progress toward this goal should be a part of student evaluation.
- Cooperation, collaboration and positive contribution to group work, which is becoming ever more important in scientific research, is an important evaluation criterion.

2) Product evaluation

The standards students should strive for are those used in the profession. For example, those used in the Westinghouse corporation to evaluate the success and progress of research projects.

h. Resources in Science for the Gifted

1) Periodicals

American Scientist
Boys' Life
Challenge
Discover
Environment
National Geographic Magazine
National Wildlife
Nature Scope
New Scientist
Odyssey
Omni
Science
Science Challenge
Science and Children
Science World
Scientific American
The American Biology Teacher
The American Naturalist
The Science Teacher
The Physics Teacher

2) Science Programs

From the National Science Foundation:
BSCS: Biological Science Curriculum Study, Houghton Mifflin
ISCS: Intermediate Science Curriculum Study, Silver-Burdett
ESCP: Earth Science Curriculum Project, Houghton Mifflin
PSSC: Physical Science Study Committee, Heath
SCIIS: Science Curriculum Improvement Study
IPS: Introductory Physical Science, Prentice-Hall
QPS: Quantitative Physical Sciences, Duke University
ESS: Elementary Science Study
The Search for Solutions, Phillips Petroleum
U. S. Dept. of Energy, Washington, D.C.
American Science and Energy Museum.

3) Places

NASA
National Geographic Society, Washington, D.C. 20036
Huntsville Space and Rocket Center, Huntsville, Alabama
Scripps Oceanographic Institute, La Jolla, CA

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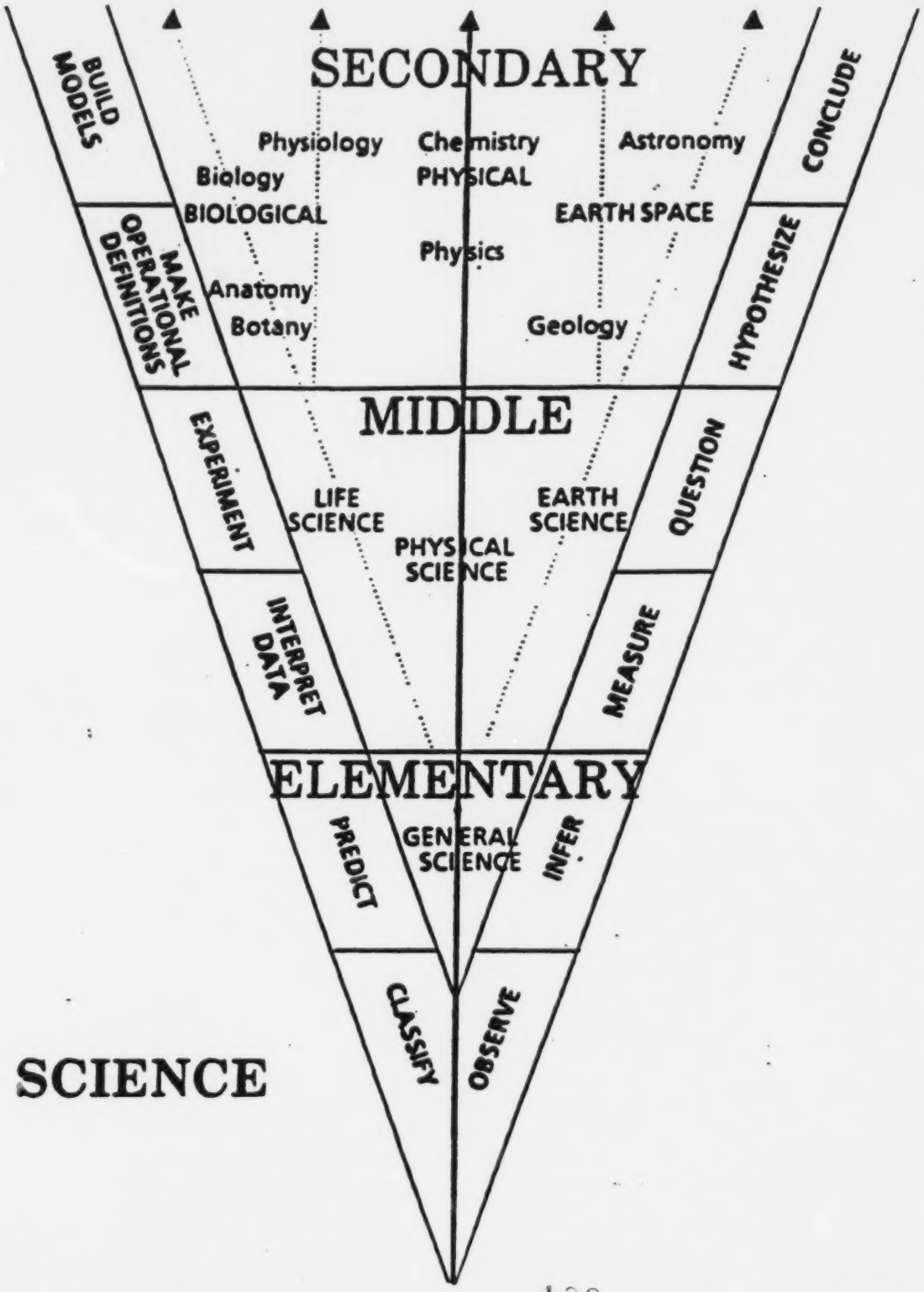

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5. SOCIAL STUDIES

a. Introduction

The social sciences study individuals and groups, and how they relate to each other and our planet. Because the world is changing so rapidly, facts quickly become obsolete and understanding process skills takes on increasing importance. The world is quickly becoming a global village. Events taking place on the other side of the planet can now have direct consequences on a child in a Kansas classroom.

An essential component of the social studies curriculum for students with gifted potential is an emphasis on higher level thinking skills, problem-solving and an understanding of responsibility to self, others and the planet. Young people need to have their potential developed by learning experiences that require analysis, synthesis (creativity), evaluation and responsible decision-making.

The process skills identified as essential components of a curriculum for the gifted have particular relevance in social studies. Each skill area (creative and critical thinking, communication, problem solving and independent learning) must be addressed. Because of the complex nature of modern life, these skills are necessary if an individual is to be an effective citizen of our nation and our increasingly global society.

In addition, students with gifted potential may assume formal and informal leadership roles during their lifetimes. Consequently, social studies holds exciting opportunities for preparing effective decision-makers for a global society.

b. Policies

In most states, the majority of students with gifted potential are involved in pull-out programs. They spend the largest part of their time in heterogeneous, self-contained, classroom environments. Recognizing this arrangement, it is important to implement certain policies in order to better serve the needs of students with gifted potential.

Students with gifted potential require time and resources beyond those generally provided by the regular school program. Each of the following policies (which are elaborated in Part I.E.) are appropriate for social studies program options and other content areas for the gifted. They should be part of the program design:

1) Minimum time spent in the program;
2) Budget;
3) Homogeneous grouping;
4) Not penalizing students in pull-out programs.

5) Acceleration possibilities, such as:

- students should be pretested in skills and excused to go on to higher level cognitive activities;
- continuous progress in a basic skill, but maintained at the same grade level;
- continuous progress in a basic skill, but going to a higher grade level for that subject;
- curriculum compacting or straight linear acceleration (the same work but at a faster pace);
- simultaneous enrollment in courses at different grade levels, including post-secondary;

6) Credit;
7) Record keeping for attendance;
8) Evaluation and grading that does not penalize students for attempting more difficult work;
9) Access to resources.

There are additional policy recommendations that must be stressed in the implementation of an effective social studies program option for the gifted. These include:

1) **Adequate funding** is essential for curriculum flexibility. Funding should include, but not be limited to, periodicals, field trips, newspapers, up-to-date maps and globes, current audio-visual materials, data bases and other research materials for in-depth study.

2) **Pretesting** is offered to allow students to test out of previously mastered material and to provide for the most effective use of their time.

3) **Simultaneous enrollment** in courses at different grade levels including post-secondary.

4) **Evaluation and grading must not penalize students** for attempting more difficult work.

5) **Assignments** required as part of a regularly scheduled gifted program *should replace, not add to,* students' regular classroom workload.

c. Required Skills, Concepts and Sequence

Students with gifted potential enter classes with various levels of knowledge. It is important to evaluate student mastery of required skills, concepts and content in order to adjust the rate and level of instruction for maximum performance. Teachers must feel free to use time flexibly in "covering the curriculum" in order to serve this population effectively. The stress should be on fundamental concepts, effective decision-making, and choice in pursuing and reporting on areas of special interest.

d. Content Modification in Social Studies

The following content modifications and strategies are appropriate for effective options in a social studies program that maximizes student potential.

1) Intra/Interdisciplinary Approach

Concepts and themes should be developed across the various fields encompassed within social studies (psychology, sociology, geography, government, economics, history, anthropology, etc.), and other disciplines (mathematics, language arts, science, fine arts, foreign languages, etc.).

The chart at the end of this section indicates ıe scope of content within the social sciences nd across other disciplines. Its fundamental oncepts deal with relationships, starting with n understanding of the self and extending to ow we relate to the family, the community and ltimately the planet.

) Inquiry-Based Approach

Active student involvement in actual research nd in-depth investigation is important. Through ıe use of community resources, students should tilize the methodology of the disciplines to take n the roles of historians, sociologists, nthropologists and political scientists.

) Problem Solving and Decision-Making ppproach

Opportunities should be provided for analysis f complex social systems, cultural patterns nd how they change, and on study of the future s well as the past. Leadership development, thical reasoning in relation to citizenship, social hange and conceptualizing at a high level of bstractness and complexity are important omponents.

Vorking on actual problems and various creative roblem-solving approaches are crucial ctivities to offer in a program of social studies ır the gifted. It is from within their ranks that ıany of our future leaders will emerge.

. Multicultural Instructional Strategies: lternative Materials and Sources

In order to foster respect for diversity and ppreciation of the contributions of various roups to our nation, a multicultural approach is sse ıal. Teachers need to use multiple ourc of information (newspapers, periodicals, esearch and reference materials, current audio-sual materials, and resource people) to vercome the limitations of a single text.

This must be done to deal effectively with roles and needs of native Americans, different ethnic and cultural groups, women in history, and causes and interactions of historical events.

1) Learning environment

The learning environment should be one which is student centered. Risk-taking, awareness, respect, appreciation of the diverse perspectives of others and multiple student options are key elements. There should also be an emphasis on the provision of hands-on and up-to-date printed materials for student use.

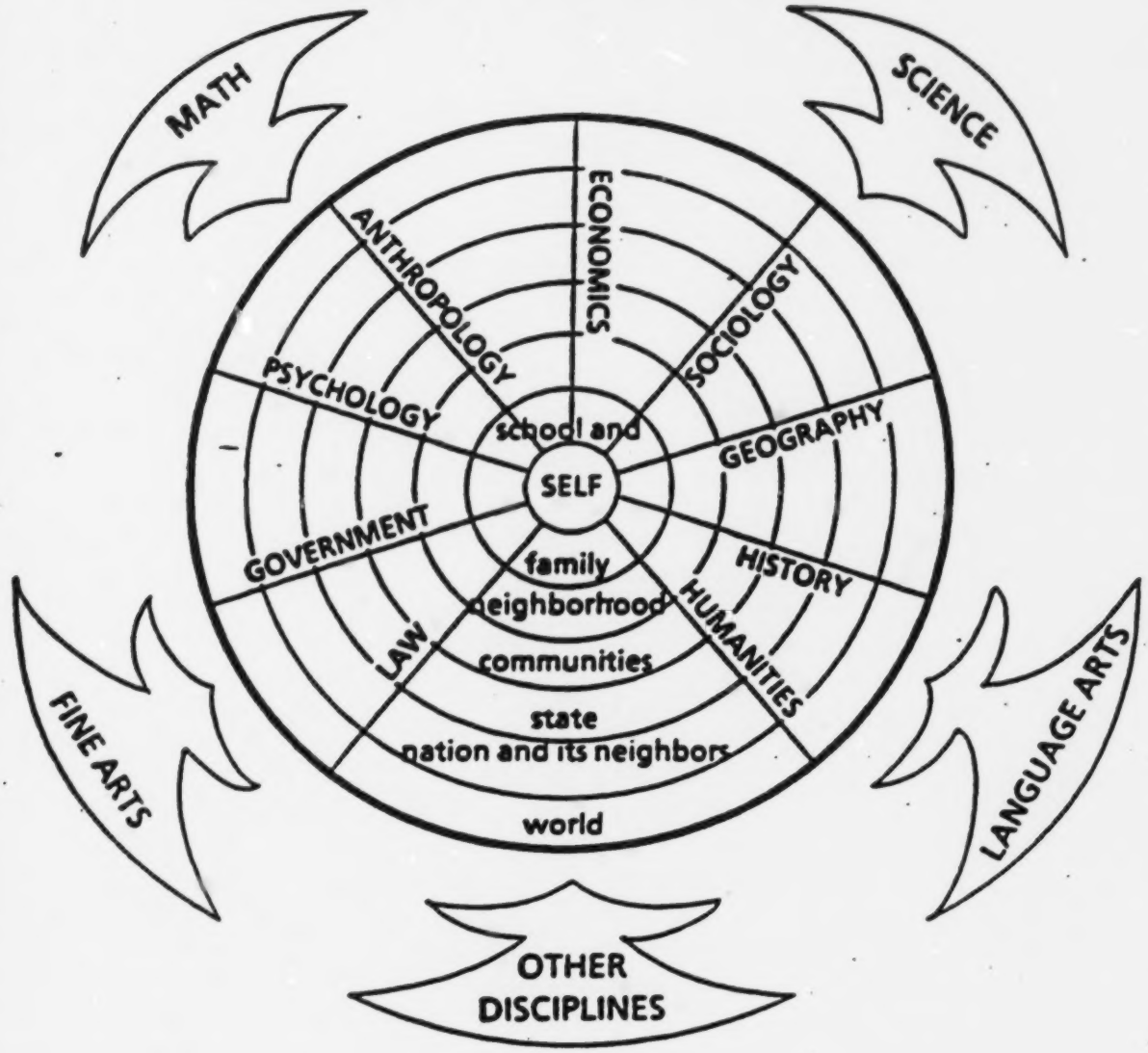
2) Multiplicity of strategies

The strategies listed below work well within this atmosphere. They provide opportunities for individualizing the social studies curriculum and providing important experiences for students with gifted potential:

- Service to the community, nation, globe;
- Work on real, immediate, family, school, local, state, national or global problems;
- Active student involvement in decision-making;
- Direct communication (letters, videos) with students from other communities and nations;
- Field-based experiences;
- Simulations focusing on solving social problems;
- Leadership and management training and experiences;
- Case studies;
- Individualized pacing;
- Self-directed studies;
- Research;
- Community resources;
- Mentorships;
- Affective experiences;
- Debate.

SOCIAL STUDIES. . .

as it relates to self and other disciplines



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3) Global interdependence

Students with gifted potential should develop an understanding of the importance of cooperation (not just competition) as part of global interdependence. There should be an emphasis on responsibility for the consequences of our actions on others. That includes not just within our own social group or nation, but on the planet as well. This is especially important for gifted children to understand, since they will be the future leaders of our world.

f. Evaluation in Social Studies

The goal, that all students become self-directed learners, dictates that evaluation techniques must be expanded. This requires current methods (pre-tests, post-tests, demonstrations and standardized tests) to be supplemented with alternate forms of teacher, student and peer evaluation.

Appropriate evaluation for projects of students with gifted potential should emphasize individual progress (as measured by predetermined criteria). All of the aspects of evaluation, the evaluator, what is to be evaluated, the criteria and the procedures for evaluation, apply in the study of social science, and other content areas. (See section II, E., Student Evaluation, below.) In addition, the following evaluation criteria should be kept in mind in a course or unit focusing on social studies.

1) Process and individual progress evaluation

- Risk-taking, the willingness to be wrong, and the capacity to accept others' views are critical cognitive and social skills that should be emphasized and evaluated in social studies;
- The affective goals of a gifted program should be emphasized and may be appropriately evaluated in social studies;
- The capacity to generate creative solutions to social problems is essential to the development of a professional social scientist's creative thinking and is therefore a useful process criterion;
- The ability to analyze the social and ethical consequences to the planet of political decisions or new technologies is a major responsibility of social scientists.

2) Product evaluation

- The criteria students should strive for are those used in the profession, which may include comprehensiveness of a perspective or analysis and its relation to multiple disciplines.

TEACHER
Urban Scholars Nomination Form

Creative Critical Thinking
Leadership Curiosity
Motiviation Specific Academic
Level: Grades 6-12
Source: University of Virginia
Contexts for Promise:
Noteworthy Practices
and Innovations in
the Identification of Gifted
Students. Cost-$5.00
Address:
Curry School of Educaiton
University of Virginia
Ruffner Hall
405 Emmet Street
Charlottesville, VA 22903

Scale for Conforming Students — See Above for inf.

Scale for Non-Conforming Students — See Above for info.

Panning For Gold — Mary Frasier
University of Georgia

"WHO" — Checklist for economically
disadvantaged
For student
Identify - Leadership
Psychomotor Ability

"O" — see above
for Parent or Teacher
Identify - Talents-Music -
Dance Performing Arts
Leadership

Checklist for Identifying Learning Strengths

H. Gradner (Multiple Intell.)
(See Univ. of VA)
Level - K-2

Teacher Checklists
Mr. James Miley
Coordinaor of Gifted

Dade County Florida
Level: Primary
(3 diff. Checklists for
every stage)
Identify: language, Psychomotor,
Mathematics, Creativity -
General Characterisitics

Teacher Information 1 and 2

Identify: Humor, Creativity
Leadership, Originality and
Academic
Rural Disadvantaged Students
Source: Project Spring
Dr. Howard H. Spicker
Indiana University
Smith Research 174
Bloomington, IN 47405
Level: Elementary and
Primary

Renzuhli
Scales for Rating the Behavioral Charchteristics fo Superior Students
Level K-12
Identify: Learning Characteristics
Motivational Characteristics
Creativity Characteristics
Leadership Characteristics
Artistic Characteristics
Musical Characteristics
Dramatics Characteristics
Communication Characteristics
Planning Characteristics

Address:
Creative Learning Press, Inc.
P.O. Box 320
Mansfield Center
Connecticut 06250

S.T.E.M.S.

Identify - General
Source IBID University of VA
Cost $5.00
Level - Primary
Target - Minority/Students

School District Bayonne

(2 checklist)
Age 3-6 or adaptable
Identify - Art or Music
Same as above

1. Evaluation for Creative Writing 2. Evaluation for Dance Auditions 3. Evaluation for Vocal Auditions	Indianapolis School of Performing Arts
Parent:	
Parent information Survey	Project Spring - Indiana U See previous entry
The Williams Scale/Divergent Thinking and Feelings as related to creativity	Parents or Teachers
Student	
Urban Scholars Program Student Interview Questions	Curry School of Ed. Univ. Of VA. Ruffner Hall 405 Emmit St. Charlottesville, VA. 22903
Community	
Survey of Adult Community Members	Project Spring - Indiana U.

Wechsler Intelligence Scale for Children-Revised

The WISC-R is the most widely used intelligence test and is truly useful. It is an individually administered test for children aged 6 to 16. The WISC-R has up to 15 possible subscales that yield a performance score, a verbal score, and a total score. The tests that make up the verbal score include the following: information, comprehension, arithmetic, similarities, vocabulary, and the optional digit-span test. The performance tests include picture completion, picture arrangement, block design, object assembly, coding, and the optional mazes. Each test is easily and rapidly administered.

It is interesting to note that the WISC-R is *not* based on a theory of intelligence. Instead, all the tests are derived from tradition—that is, they are tests that psychologists in the early part of this century believed to be indicative of major intellectual abilities. Over the years, however, the vast amount of research on the WISC-R has made it one of the most thoroughly evaluated psychological tests existing. The WISC-R has proven to be an excellent predictor

1

Resources

Standardized Instruments Used in Identification of Gifted Students

of the ability to learn in school, and it is highly correlated with achievement tests, aptitude tests, and just about every other measure of general intellectual abilities.

The WISC-R is more than a predictor of learning ability, however; it is also an excellent instrument for generating hypotheses about the nature of a particular child's abilities as well as possible barriers to achievement. Performance on arithmetic and coding, for example, may give some notion of a child's powers of concentration; performance on comprehension may indicate the extent of a child's reasoning and judgment capabilities. A skillful interpreter not only looks at the subtest scores, but at the whole of the child's behaviors in the testing situation.

Who should administer the WISC-R? Preferably, school psychologists or other psychologists trained in individual intelligence testing should administer and interpret the WISC-R. This is not only to ensure that the test is given properly. More importantly, psychologists who are trained in the WISC-R administration also understand the psychometric and statistical properties of the test—and therefore its limitations. The danger of the administration of the WISC-R by a clerk or assistant is that the interpretation of the scores will be "mechanical," that is, based on a strict interpretation of the manual.

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Use of the WISC-R With Gifted Students

There is strong evidence that gifted students not only score higher than average individuals on the WISC-R, but that they have qualitatively different patterns of scores (Brown & Yakimowski, 1987). This may be because gifted children actually process information differently than average children. Gifted children may also vary more in their scoring patterns. Therefore, the use of a single WISC-R score to describe a gifted child's abilities may obscure more than it enlightens.

An examination of subscale scores, although considered inappropriate for average students, may be necessary to obtain a fuller understanding of the gifted child's abilities. Hollinger and Kosek (1986) argued persuasively that educators should go beyond the use of the full-scale IQ score. Their research showed great variability in performance on the subscales among students scoring higher than 130 on the full scale. About 35% of these students had significant discrepancies between their Verbal and Performance scores. Interpreting the Verbal and Performance scores

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separately and examining subtest scores thoroughly may ensure more effective placement in academic programs.

The Stanford-Binet (3rd and 4th Editions)

The Stanford-Binet, developed by Lewis Terman, the "father of the gifted child movement," is traditionally considered the best instrument for identifying gifted children. Up through the 3rd edition—"Form L-M"—the Stanford-Binet was very consistent from revision to revision. The items were for the most part very similar to the original items considered by Binet, and then Termun, to be indicative of intelligence. Beginning at age 2 and proceeding through levels of Superior Adult, items include vocabulary, reasoning problems, memory of strings of digits, and general information. The 4th edition, called SB4, represents the most extensive change of format to date, although many items are the traditional ones. Because it is a recent revision, its use with gifted students has not yet been fully explored. Therefore, the 3rd edition—which is still available and widely used—and the 4th edition will be reviewed separately.

The Stanford-Binet (3rd Edition)

This edition of the Stanford-Binet, developed in 1960 and renormed in 1972, is known as Form L-M because it combines two forms, L and M, developed in 1937. This widely used intelligence test yields one global score as a measure of general intellectual ability. The Stanford-Binet 3rd edition, like its predecessors, groups items according to age levels. The test taker progresses through the age levels until all the items in an age level become too difficult. This procedure yields a "mental age"; in previous editions, IQ was figured as a ratio of chronological age to mental age. The 3rd edition, however, provides a means for figuring a "deviation IQ" score, now a more commonly understood score, with a mean of 100 and a standard deviation of 16. The Stanford-Binet 3rd edition is a largely verbal test, although it does contain some nonverbal items. For gifted children, it has a very high "ceiling"—that is, even the brightest children are not likely to be able to answer all the items in the Superior Adult levels. However, for quite a few brilliant adults, the Superior Adult levels may be too easy.

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The Stanford-Binet (4th Edition)

The SB4 is a new test in several ways. First, the items are not grouped by age, but in separate tests in increasing order of difficulty. Also, for the first time, four major cognitive areas are represented, rather than one single, global entity called intelligence. The four areas are Verbal Reasoning, Quantitative Reasoning, Abstract/Visual Reasoning, and Short-Term Memory. Instead of beginning at a particular age level, an entry level is based on performance on the Vocabulary test. Then the test taker proceeds to take 8 to 13 of the 15 available tests. Each test yields a Standard Age Score (SAS) with a mean of 50 and a standard deviation of 8, which represent the individual's performance on that test compared to his or her age group. SASs are also computed for each cognitive area and for a composite; these have a mean of 100 and a standard deviation of 16. Many items are taken from old revisions, but new items have been created to test fully the four cognitive areas. Like the WISC-R, the Stanford-Binet requires a trained administrator.

Use of the 3rd and 4th Editions With Gifted Students

The 3rd edition of the Stanford-Binet is heavily verbal in nature, but the 4th edition is less so. Nevertheless, with vocabulary as the screening test, and with vocabulary still having the strongest relationship to the general ability score, it is still a language-oriented test. Both the 3rd and 4th editions tend to yield higher intelligence scores than the WISC-R or the Kaufman ABC for gifted students. Both editions seem to provide excellent measures of gifted students' general cognitive ability. The 3rd edition is well established as a predictor of academic performance for gifted students, and the 4th edition is in the process of being established as a predictor of academic success for this group of students.

The Kaufman Assessment Battery for Children

The K-ABC is a more recently developed intelligence test (Kaufman & Kaufman, 1983). It is a more nonverbal test than either the WISC-R or the Stanford-Binet; in fact, a completely nonverbal scale is available for hearing impaired, speech- and language-disordered, and non-English-speaking subjects. The test is for children 2.5 to 12.5 years old. It has 16 subtests, although a particular test taker would be administered a

maximum of 13. The subtests are divided into 10 "mental processing" tests such as Magic Window, Face Recognition, Hand Movements, Number Recall, and Spatial Memory, and six "achievement" tests such as Expressive Vocabulary, Faces and Places, Arithmetic, and Riddles.

The distinction between "mental processing," considered to be synonymous with intelligence, and achievement is not clear; it is hard to see how some items represent native ability and others learned ability. The mental processing items are highly spatial-visual, therefore students with strong skills in these areas are likely to be rated as more intelligent than more verbally oriented students with lower spatial-visual skills.

Use of the K-ABC With Gifted Students

The K-ABC tends to give lower estimates of intelligence for gifted students than the Stanford-Binet or WISC-R; in one study, gifted students' scores on the K-ABC were, on the average, 8 points lower than Stanford-Binet scores. However, spatially-visually gifted students with poorer English or lower verbal abilities would be favored by this test.

Other Tests of Intellectual Ability

The Woodcock-Johnson Psycho-Educational Battery

The Woodcock-Johnson is a set of innovative tests that measure cognitive ability, achievement, and academic interests. It can be administered to individuals aged 3 through 80. All tests have been standardized on the same norming sample. The cognitive ability test is excellent in that many items are learning tasks; the administrator can observe how the individual actually learns. The cognitive ability test includes such items as picture vocabulary, memory for sentences, analysis and synthesis, and analogue. Achievement includes such items as word attack, calculation, proofing, science, and humanities. Academic interests include reading interest, math interest, language interest, physical interest, and social interest. The flaws of the Woodcock-Johnson include complicated scoring and interpretation, and some overlap or confusion of cognitive ability and achievement items. The Woodcock-Johnson has not been used enough with gifted students to determine how students labeled as gifted perform compared to average students, or to discover how they score on this test relative to

other intelligence tests. It seems, however, to be a promising instrument for this group.

Raven Progressive Matrices

The Raven Progressive Matrices are a series of matrices in which one part is missing; the test taker has to choose, from among six alternatives, the part that best completes the matrix. This is a completely nonverbal test; the instructions can be pantomimed. The Raven Progressive Matrices correlate highly with the performance section of the WISC-R and moderately with the full-scale score. Because of its nonverbal nature, it is considered an appropriate test for non-English-speaking or language-disabled individuals, and it may hold promise as an instrument for identifying minority and disadvantaged gifted students. The Raven Progressive Matrices were very successful in identifying large numbers of minority gifted students in the Chicago public schools (Baska, 1986). The Raven is available as three scales—Colored, Standard, and Advanced (Colored does not refer to race). The Advanced Progressive Matrices seem to be the most useful with gifted students because of the high "ceiling" for this scale.

System of Multicultural Pluralistic Assessment (SOMPA)

SOMPA is actually a test that combines WISC-R scales with rating forms in a way that provides a less biased estimate of the abilities of minority students. The SOMPA compares minority students not with mainly White, middle-class norms, but with other students within the same minority group. Therefore, Blacks are compared with Blacks, Hispanics with Hispanics, and Native Americans with Native Americans. SOMPA is a good technique for identifying gifted students within a school or district, but does not allow for comparisons across gifted programs.

Structure of Intellect-Learning Abilities (SOI-LA) (Screening Form for the Gifted)

The SOI-LA began with structure of intellect analyses of the Stanford-Binet and the WISC to identify dimensions of giftedness. The Structure of Intellect Model holds that giftedness is multidimensional. According

to Guilford, who developed the Structure of Intellect Model based on factor analyses of intelligence tests, intelligence can best be understood as a composite of 120 separate abilities. These abilities are categorized by their contents, operations, and products. Of these many abilities, the Learning Abilities Test (SOI-LA) measures 24 abilities; the Screening Form for the Gifted reduces these to 10, which yield the best results for students identified as gifted.

The SOI-LA SFG is meant to identify intellectual strengths and weaknesses of gifted students so that educational programming can be individualized. Unfortunately, the SOI-LA SFG has not performed as well as expected. According to Clarizio and Mehrens (1985), the test "promises more than it delivers" (p. 113) in that it has serious psychometric limitations. It has not yet proven to be as valid or reliable as instruments for identification need to be, and also suffers from the conceptual limitation of breaking down intellectual abilities into too many factors of too little importance. However, because the instrument may be less biased in the selection of minority and disadvantaged gifted, research needs to continue even though the scale is probably not ready for general use.

Torrance Tests of Creative Thinking (TTCT)

The TTCT includes two tests, one verbal and one figural. The verbal test, "Thinking Creatively with Words," provides scores for fluency, flexibility, and originality. Subtests of the verbal test include Asking, Guessing Causes, Guessing Consequences, Product Improvement, Unusual Uses, Unusual Questions, and Just Suppose. The figural test, "Thinking Creatively with Pictures," provides scores for fluency, flexibility, originality, and elaboration. Subtests of the figural test include Picture Construction, Picture Completions, and Parallel Lines.

The TTCT can be administered and scored by teachers, and interrater reliabilities are high. Other forms of reliability are moderate; overall, the test is well constructed. A major problem with the TTCT is determining what it really tests, because there is no well-explained theory of creativity behind the tests. It is not clear what the relationship of fluency, flexibility, originality, and elaboration is to actual, productive creativity. Also, there is considerable overlap among fluency, flexibility, and originality; a single total score might be more appropriate. Torrance never claimed this to be a definitive test of creativity, or that it should be used alone to identify

creative giftedness. Rather, the TTCT is best used as a research instrument or to support other observations and tests. It is an interesting, enjoyable test for test takers; however, the scoring for the test administrator is tedious.

Achievement Tests

Stanford Achievement Test (1982)

Six levels of this test are available, ranging from grades 1.5–2.9 to grades 7.0–9.9. Subtests in mathematics, reading, and listening comprehension are available as separates. Partial batteries are available without science and social science subjects (grades 3.5–9.9). An optional writing assessment program is available (grades 3.5 - 9.9). This is one of the best available achievement batteries. This edition is part of an outstanding tradition of item writing, item analysis, content analysis, and norming.

Peabody Individual Achievement Test (PIAT; 1970)

This test may be administered to grades K-12. It yields six scores: mathematics, reading recognition, reading comprehension, spelling, general information, and total. It is designed to be administered to individuals.

Wide Range Achievement Test (WRAT; 1978)

The WRAT has two levels: ages 5–11 and ages 12–64. It provides three scores: spelling, arithmetic, and reading. A tape cassette is available for ease of administration. The WRAT has adequate technical qualities, but overall is not an adequate diagnostic instrument for the gifted and talented.

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